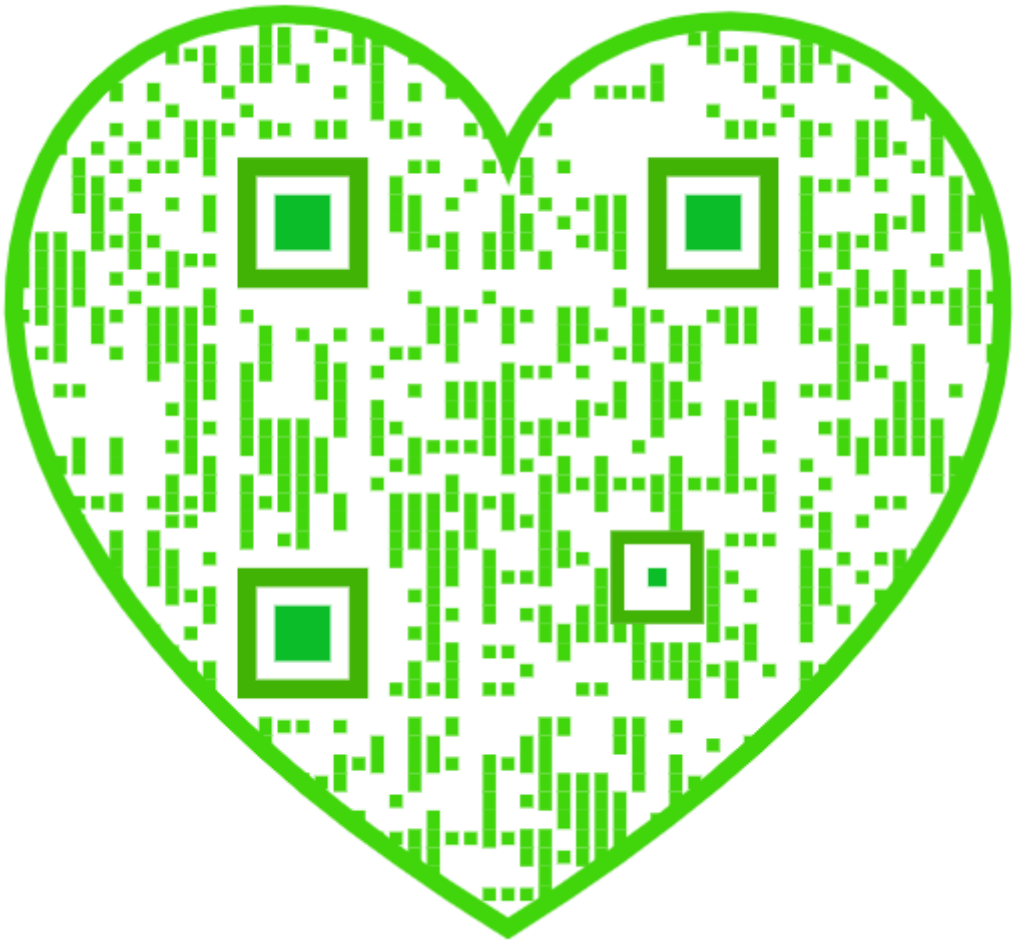

THE ARCHITECT

VOLUME XIV · NUMBER 1
JULY 1917

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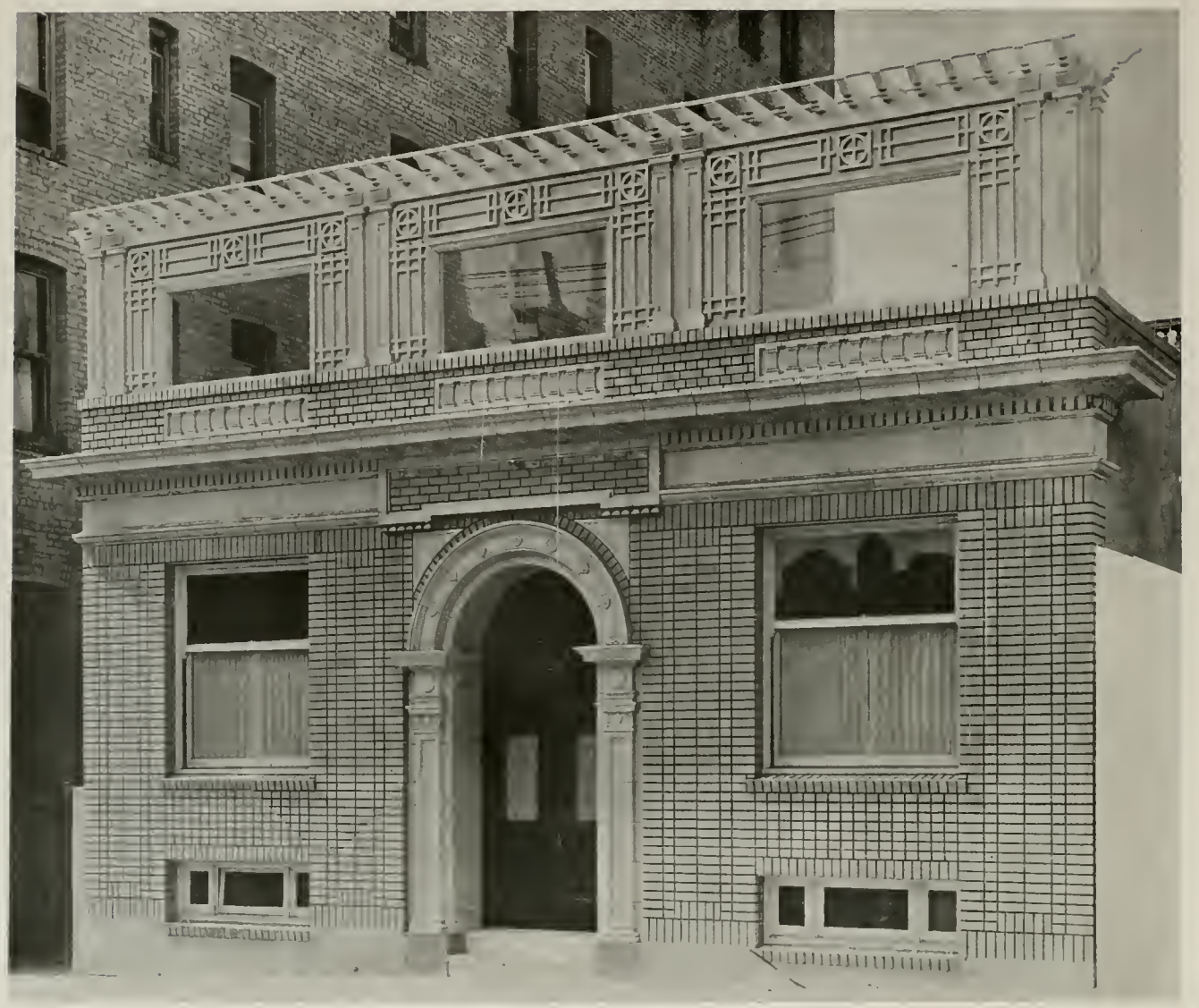

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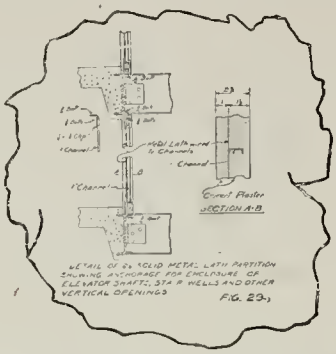

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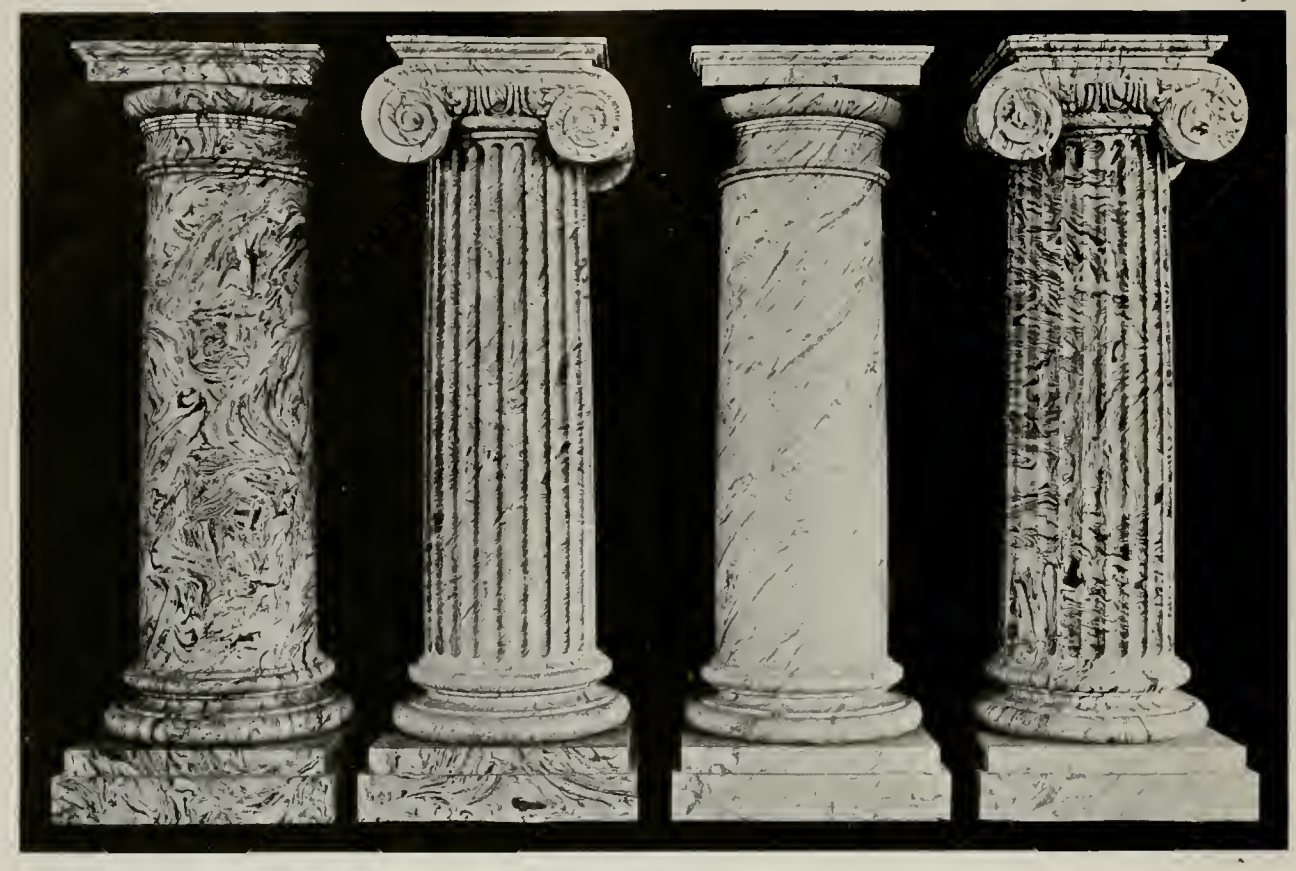

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Vol. XIV. No. 1

THE ARCHITECT

Associate Editors for July, 1917

Published by
THE ARCHITECT PRESS

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DAVID C. ALLISON - - Los Angeles
OSWALD SPEIR - - - - Los Angeles

HARRIS ALLEN
EDITOR

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¶ Published in the interest of the architectural profession, on the first of each month, at 245 Mission Street, San Francisco. Entered as second class matter August 4, 1911. Subscription price in the United States and possessions, $5.00 a year: foreign and Canadian, $6.00 a year. Single copies, 75 cents each.

¶ Changes in, or copy for new advertisements, must reach the office of publication not later than the fifteenth of the month preceding issue. Advertising rates and any other information will gladly be given on application.

¶ The editor will be pleased to consider contributions of interest to the profession. When payment for same is desired, this fact should be stated. E. D. McDonald, Northwest Representative, 4100 Arcade Building, Seattle, Washington.

CHIESA DI S. MARIA IN COSMEDIN, ROME

THE ARCHITECT

VOL. XIV SAN FRANCISCO, JULY, 1917 NO. 1

CERTOSA DI PAVIA

Competition for a Small House and Garage

An Analysis of the Jury's Criticisms

By WILLIAM C. HAYS

IN connection with the arrangement and "editing" of these criticisms, often but vaguely formulated in discussion, it should be stated that the random notes used as the basis of this review were made prior to the identification of authorship of the "prize-winning" and "mentioned" designs. Many minor criticisms, mostly in matter either too detailed or irrelevant, are omitted here because the limit of space allows only mention of general, guiding principles. In a separate paper, Mr. Spier, also a member of the jury, is commenting on the drawings from the "clay products" point of view.

A synopsis of the criticism of these designs follows, the authors awarded "mentions," excepting the first and second, being here arranged in alphabetical order.

First Prize: Mr. Geo. Ekvall has shown a modest, unostentatious house, decidedly adapted to execution in clay products, and expressive of a California setting. It is, nevertheless, not too individualistic but that it will take kindly to its environment. The masses are broken, but well proportioned, and the house has variety and interest. The detail study is commended, although the stair window is too large. An awkward relation of the main ridge, which terminates with a gable at one end and a hipped roof at the other, would prove difficult to solve satisfactorily in execution. Simplicity and straightforwardness are qualities of the general scheme; the house and garden —inseparable in California — are in the main well related, although in detail both the garden itself and the fenestration of the garden front of the house leave something to be desired. The relation of porch piers to the living-room windows is unfortunate. The second floor plan is logical and clear cut. This design combines more fully than any other the qualities to be sought, and its case is vigorously presented.

Chiesa di S. Maria delle Grazie. Milan.

Second Prize: Mr. Donald Reubin Wilkinson, alone, chose a one-story scheme and with skill presented the design which most strongly commended itself for qualities of pure charm. The author seems, of all the competitors, to have most clearly entered into the spirit of the program, for he has imagined an ensemble which is very real, as it is most alluring.

The house is clearly Californian, although sectionally best suited to the South. The choice of type has been questioned because of the restricted size of the lot, because of a prejudice sometimes found against sleeping rooms on the ground level, and because the type is not sufficiently general to fit well into the ordinary environment, excepting in the relatively few districts where one-story houses are the rule. The study of the entrance detail is inadequate and feeble, and the architectural scale is too small.

The plan is one of the best as to both house and garden. The clever use of clay products for floor and paving patterns in plan has been noted. This set of drawings is the best and most scholarly presentation in the competition. The author has conjured up a Southern California atmosphere in the treatment of the perspective, but one's first thought reaction to the long, low lines of roof and wall is, of course, "adobe." This is no just argument, however, against its satisfactory execution with warm-toned brick walls.

Third Prize: The design by Messrs. Frank T. Kegley and H. Scott Gerity commended itself by its simplicity of mass, and the particularly interesting use of brickwork textures, especially in the charming study of the gables. The architectural possibilities of the main entrance are only suggested, and far from realized, in the detail study; furthermore, there is a somewhat unfortunate relation in proportion between the first floor windows and the porch arch, the arch having a stilted appearance.

The plans of the house and garden are each interesting in themselves, but the complete lack of relation between them is bad. There is a certain directness in the house plan, but the advisability of entering the dining room only through the living room is questionable. The cleverly indicated garden house and pergola are too large for the house, as is the scale of the garden generally. The plan sheet is perhaps the best presented drawing in the competition.

Fourth Prize: Somewhat lacking in the intangible quality, charm, it was the author's grasp of the problem as a whole that attracted the jury's attention to the design by Mr. Joe Weston. The house is well placed on the land, making possible the development of many interesting features, notably the fine indoors-to-outdoors transition through the related living room, loggia, lawn and garden, with an orange grove and banked encalyptus trees at the rear property line. The living room, of proportions ordinarily too narrow, is in this plan not so objectionable, because of its opening largely to the garden loggia with which it is closely tied.

The plan of this house is more interesting than that of the third prize winner, but a better arrangement of entrance might be found than the doubled right-angle turns. The main sleeping porch is not expressed in facade, a fault found also, but to a much less degree, in the third prize design. The house is well characterized, both for its California environment and the proposed materials, but one wishes it showed a finer study of mass and proportion.

Fifth Prize: Mr. H. A. Moldenhour has presented a thoroughly sane house, conspicuous for its utter lack of any distinguishing California character. In certain localities, if built, this house might become acclimated, especially if vine-clad, and with the right kind of tree growth about it. It is a generalization of the clay products house; is marked by good taste and shows thorough knowledge of the required materials. There is a clever bit of detail in the terra cotta cove cornice and metal rain gutter; but the entrance detail is less convincing. The garage is satisfactory and harmonizes well with the house.

The plan is good, and in the first floor the vistas have been well studied, in the two directions; first, through dining room, hall and living room, and, second, through living room, porch and garden. Apropos of the latter, it is strange that the vista should be broken by a pier on axis, between the porch and

the garden end of the living room. This fault, and an awkwardly long structural span in the center of the porch, should have been noticed by so capable a man as the author of this design.

Sixth Prize: Brickwork textures have been exaggerated by Mr. Harry M. Michelsen, in the too apparent effort to emphasize clay products, and in this respect the design is strained. The omission of the header-patterned panels shown over the first floor windows would tend toward a much-needed simplification, for the main entrance, chimney, and covered passage to the garage give enough variety and interest. The freehand rendering of the entrance motif is well studied; perhaps the best detail in the competition. The impression given by the exterior is that of a much larger establishment than the program indicates.

The plan has interesting features, but is inadequately presented, and there is but "a lick and a promise" of the India ink rendering called for. This author is one of the few choosing to plan for a corner lot, and thus has designed for conditions that are the exception rather than the rule.

First Honorable Mention: The drawings of Edward L. Frick appeal most strongly because of their interesting suggestion of brick textures. The design is in character foreign to California, as regards the broken masses and complex roof forms. It would, however, make a picturesque, charming house, suitable for a family in circumstances such as are indicated by the program. By far the best features of the main floor plan are, first, the entrance court, porch and hall; and, second, the sequence of living room, terrace and garden with its terminal fountain. These are, without doubt, the most interesting and intelligently conceived detail compositions in plan brought out in the competition. The second floor would be badly lighted and, although there is a well-studied principal suite consisting of bedroom, bathroom and porch, the remainder of this plan is impossible. The scale detail of the entrance is among the best submitted.

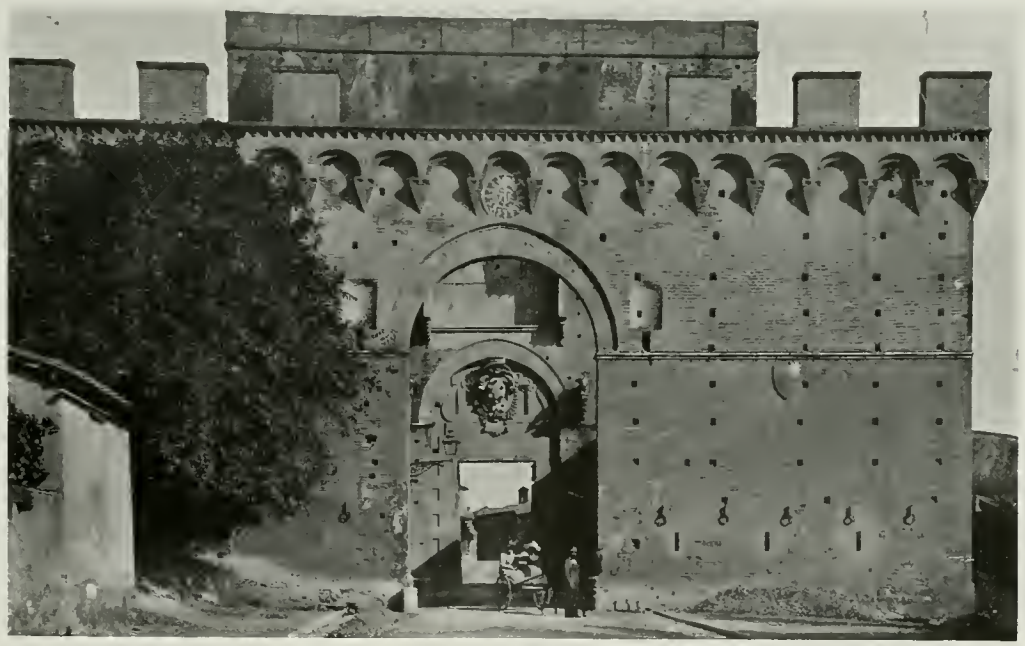
Second Honorable Mention: The design of E. D. Flynn and W. P. Stephenson, in the main, is a well-studied, "livable" house, which would be satisfactory anywhere else in the United States but in California, lacking completely, as it does, any suggestion of local color. Its distinct entrance front and garden front are to be commended. The general impression created is that of a larger house than contemplated by the program, and at least one room, not called for by the program, has been introduced in the ground floor plan. The plan is intelligent and has been considered by its authors in a large way. The perspective is one of the best presentations in the competition, although rather overwrought.

By way of comment on the other "mention" designs:

Raymond W. Jeans has designed a house well characterized, for both material and its location in California. Except for several flagrant faults, this design would have been a potential prize winner. The presentation is good, but the author himself saw the bad proportion of the long wing, which is foiled by a large tree mass. The entrance detail is good, though small, as is also the sleeping-porch loggia, but the placing of the main sleeping porch toward the street is a serious defect. The fenestration is especially well studied. The design would be improved by subordinating the mass of the garage. The relation of the garden, living room and porch is nearly, but not quite, good. A slight shifting of positions of the entrance hall and the garden path would have brought these into the axis of the dining room and so have cleared a fine vista.

Ernest E. Weihe has sent in a plan which is undeveloped, but rich in suggestion. It is the charm and romantic quality of the exterior and the hint rather than the finished study of brick, terra cotta and tile treatment of the main entrance, which have most strongly drawn the attention of the jury to this design. There is a sense of shimmering sunlight, indicated in both the architecture and the rendering, that is surely suggestive of California.

E. B. Hart has shown a larger and more pretentious house than is reasonably inferred from the program, although it is appropriate for California



Porta Romana. Siena.

and is distinctly a clay products design. The plan is more ingenious than clear. The garden behind the house has been interestingly suggested, although not fully studied, and the view of the house from the shelter at the end of the garden would not be pleasing. The long projection of the garage beyond the front plane of the house is also questionable.

Alfred Nibecker. The clear-cut study of brick wall and tiled roof shown in this design have made a strong appeal to the jury. The simple hood of terra cotta over the entrance door would execute well, but the door itself leaves much to be desired. The plan is far below the exterior in merit. Furthermore, the author has violated the program in adding a sixteenth-inch scale plan not called for. Comparison of the plan with the perspective shows forced treatment of the fenestration, the window spacing being in no sense an outgrowth of the plan. This appears to be an attempt to mould some sort of plan within a preconceived exterior shell.

J. E. McGuise and J. J. Stanton. There is here a certain suggestion of latent possibilities, and one would like to see what might be done in the development of brick wall and tile roofing textures, if the spirit of the entrance detail were the keynote for executing the design. The plan of the second floor is distinctly poor, compared with that of the first.

Entrance to Villa Curonia, near Florence, Italy.

Reproduced from "Smaller Italian Villas and Farmhouses," by Guy Lowell.

Gene Verge. These drawings, with all their contradictions, interested the jury from the beginning. The perspective indicates a house which is clearly Californian; it is, however, not essentially brick, but is rather more suggestive of a plaster finish. The entrance detail is attractively studied and presented, but is much too diminutive in scale. The sleeping porch openings of grouped arches with colonnettes are "dinky" and impossible, and there seems to have been little of the sense of reality in the designer's mind. Except for the handicap of its incredible plan, this design would have been placed higher; but, starting with a good basic idea, it is hard to understand how so consistently "sad" a plan could be evolved. The sketchy suggestion of a garage has charm.

Apropos of the showing made by the designs, as a whole, the jury notes that the dissymmetrical plan is the type which the competitors chose almost invariably. One plan only was designed for the minimum lot specified, two for intermediate dimensions, and the others for the maximum. One or two competitors assumed corners, all others having planned for the more usual "inside" lot.

Members of the jury have also commented on several too common oversights. First, is the failure to realize that any house means more than mere walls and roof; that there is presupposed an entity, a habitation, extensive from boundary to boundary of the land; that between the enclosed house and the open garden there must be unity; that these are fundamental principles in no way modified by such detail as the materials of construction or the locality of the site.

Common, too, has been a lack of interpretation of plan, in the exterior design of the house. But the commonest and strangest shortcoming has been the almost complete failure to visualize the characteristic setting of a house in California landscape. The partly vine-clad house, the house in realistic relation to broad live oak, bay or pepper trees, to tall screens of eucalyptus or to semi-tropical planting; the outcropped rock and massed flowers; all of these, the dramatic quality, the local color, are noted mainly by their absence.

Program

Competition for a small house and garage, to be built of brick and other clay products. Competition open to all architects and draughtsmen on the Pacific Coast.

The problem is a small, detached house and accompanying garage suitable to the climatic and landscape conditions of California.

The outer walls of both buildings shall be designed for brick construction, trimmed with brick or terra cotta, and to have an air space in the walls.

The foundations are to be designed for brick and the roofs are to be covered with clay tile.

Site: The house is to be built upon a level lot in a town or suburb of a large city. The width of the lot is to be not less than 50 feet nor more than 100 feet, with a depth not exceeding 150 feet.

Requirements of House: The house shall contain an

entrance hall, living room, dining room, kitchen, pantries, porches, etc., three main bed rooms with two bath rooms and two sleeping porches. There will also be one other sleeping room and bath for servant.

Requirements of Garage: The garage shall be provided to accommodate one machine, wash rack, etc.

Costs: The total cost of house exclusive of the land shall not exceed $8,500.00, which shall include excavating, heating, plumbing, lighting fixtures, etc., but exclude planting or gardening effect.

The total cost of the garage shall not exceed $750.

Cubic Contents: Houses of this type of construction have been built in this section of the country at a cost of 25 cents per cubic foot, and this rate shall be taken as the basis for computing the cost, and no design whose cubical contents shall exceed 34,000 cubic feet will be considered. Porches and verandas are to be figured separately at one-fourth of their total cubage, and their cost is to be included in the total cost of the house.

The garage shall be figured at 18 cents per cubic foot.

Measurements: The measurements for computing the contents of both buildings must be taken from the outside of the exterior walls and from the basement floor level, if any, of the house, to one-half the average height of the roof. If only a portion of the basement is excavated below the house, then the measurement for the unexcavated portion shall be taken from a two-foot level below the first floor line.

House at Lake Trasimeno, Italy.

Reproduced from "Smaller Italian Villas and Farmhouses," by Guy Lowell.

The measurements for the garage shall be taken from the floor line, to one-half the average height of the roof.

Drawings Required: There are to be two sheets of drawings. On the first sheet a pen and ink perspective of the house without wash or color, drawn at a scale of four feet to one inch; a detail of the front entrance at a scale of three-fourths inch to one foot, with other details if desired; and a pen and ink perspective of garage at a scale of four feet to one inch.

On the second sheet a plan of the first floor, and, if used, the basement and second floor, at a scale of eight feet to one inch; a section at a scale of three-fourths inch to one foot showing the construction of exterior walls with cornice; and schedule of cubage. In connection with the plan of the first floor, show the development of the whole lot in reference to the placing of the house and garage, the paths and planting. This plan is to be rendered in India ink wash. No color allowed. The cut of walls on the plan of the building will be blocked in solid. Both drawings to have the title, "Competition for a Small Brick House and Garage."

Size of Drawings: The size of both sheets is to be 20 inches by 26 inches, with a border line drawn one inch from the edge. The paper is to be white and not mounted. Tracing paper not allowed. All drawings shall be delivered flat without any mark of identification, and shall be enclosed in a sealed wrapper, on the outside of which shall be lettered THE ARCHITECT, 245 Mission Street, San Francisco, Cal., and the title "Competition Drawing for a Small Brick House." The wrapper shall contain with the drawings a sealed envelope, enclosing the name and address of the Competitor.

The designs shall be judged by a jury of three members of the Architectural Profession,—one from the San Francisco Chapter of the A. I. A., one from the Southern Chapter of the A. I. A., and one from the San Francisco Architectural Club.

First consideration will be given to appropriateness of design in an æsthetic sense to the material employed, and its fitness for location and environment in California.

Second, excellence in plan.

Drawings which do not reach the requirements of the program will not be considered.

The prize drawings are to become the property of THE ARCHITECT, and the right is reserved to publish or exhibit all or any of the others.

The full name and address of the designer will be given in connection with each design published.

For the design placed first there will be given a prize of $500; second, $300; third, $150; fourth, $100; fifth, $50; and sixth, $50.

Notice: The competition was possible through the courtesy of the Editor of THE ARCHITECT. It was conducted under the patronage of the San Francisco Chapter of the American Institute of Architects, the Southern Chapter of the American Institute of Architects and the San Francisco Architectural Club.

The generous donations made by the following

(Continued on page 57)

Competition for a Small House and Garage

Report of Jury, July 11th, 1917

The Jury appointed to judge the Competition for a Small House and Garage reports having made awards as follows:

First Prize—($500.00), to Mr. Geo. Ekvall, Tacoma, Wash.
Second Prize—($300.00), to Donald Reubin Wilkinson, Los Angeles, Cal.
Third Prize—($150.00), to Frank T. Kegley and H. Scott Gerity, Los Angeles.
Fourth Prize—($100.00), to Joe Weston, Los Angeles, Cal.
Fifth Prize—($50.00), to H. A. Moldenhour, Seattle, Wash.
Sixth Prize—($50.00), to Harry M. Michelsen, San Francisco, Cal.

In addition to the prize designs the following are adjudged:

First Honorable Mention—Edward L. Frick.
Second Honorable Mention—E. D. Flynn and W. P. Stephenson.
Additional Mentions—E. B. Hurt, Raymond W. Jeans, J. E. McGuise, Alfred Nibecker, J. J. Stanton, Gene Verge and Ernest E. Weihe.

There have been held five meetings of the Jury, on Friday, Saturday and Sunday, June 8th to 10th, and the decisions have been unanimous. Certain instructions to the Jury, as to the relative importance of "appropriateness to materials and location" and "excellence in plan," being explicit in the program, these considerations have been given full weight in reaching the decisions.

Thirty-seven designs were submitted, by competitors whose addresses are scattered geographically from Spokane and Seattle, to Los Angeles. One condition of the program seems to have been generally misunderstood, namely, the prohibition of "any mark of identification," as almost one-third of the participants used some sort of device or motto. It was the opinion of the Jury that a disregard, if so general, must mean a misunderstanding of the program's intention in the term quoted. The drawings of one competitor were made on light buff, instead of white paper, one violated the requirement in regard to borders, one in the size of sheets, and one in that the drawings were delivered "rolled" instead of "flat." Fortunately, the Jury found none of these transgressors in the prize-winning class. A strict observance in future competitions might, however, mean serious loss, should the author of an otherwise successful design violate technicalities of the program.

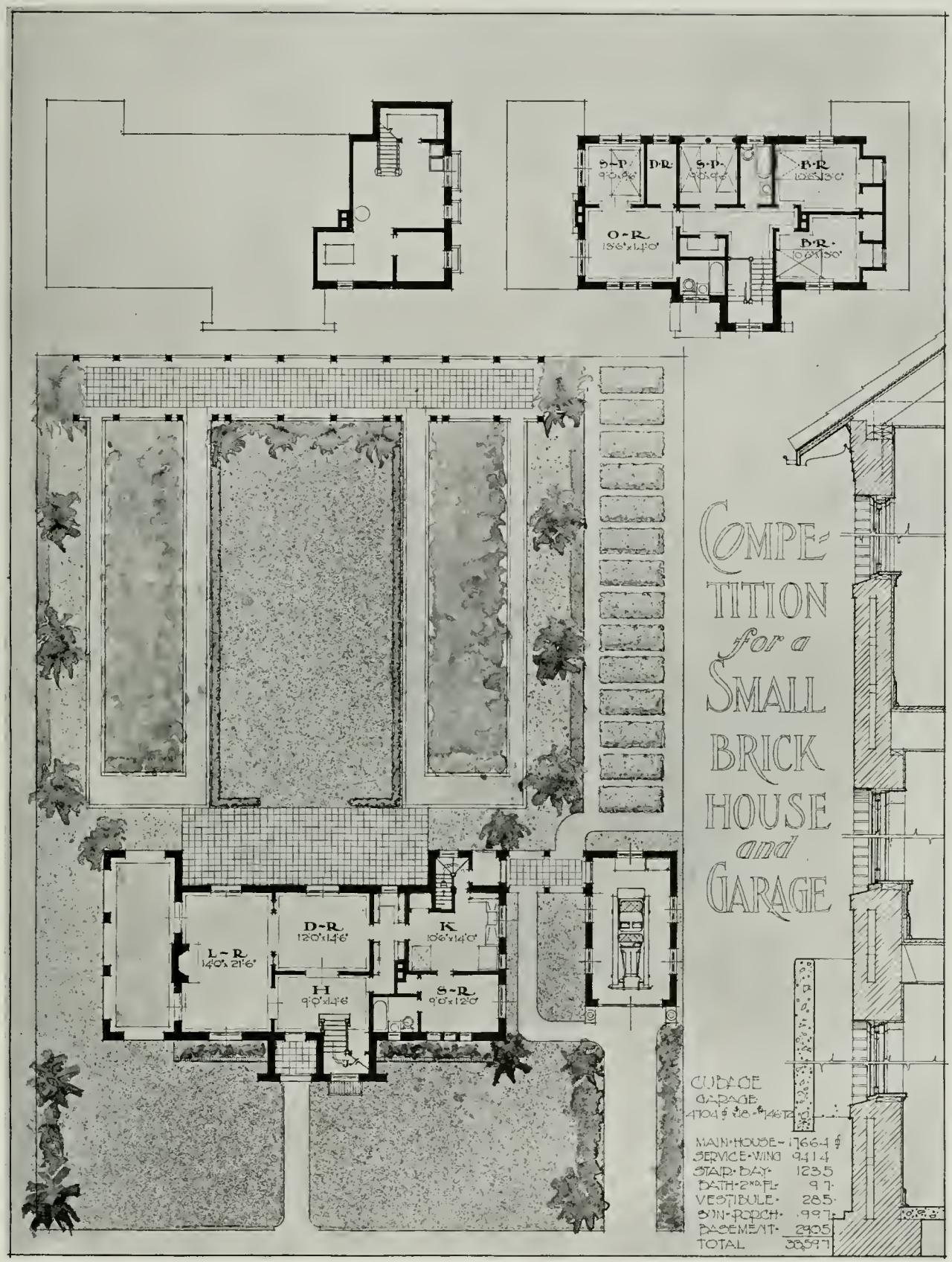
It is noticed, with regret, that no one design combines in marked degree *all* of the requisite qualities as to:—general scheme, suitability for materials and location, that simplicity and lack of ostentation inferred by a low cost-limit and the indicated household, "livableness," the imaginative quality, scholarly handling, and adequate presentation. It seems, however, that the excellent showing here made is but the beginning, and that in all probability there will be more general, keener participation in any future competitions of a like nature.

The members of the Jury, for themselves, and, they feel free to assume, for the competitors and the profession generally, take this opportunity to extend thanks to the clay products manufacturers, and to "The Architect," for their most generous acts in making this competition, the first of its kind on the Coast, possible.

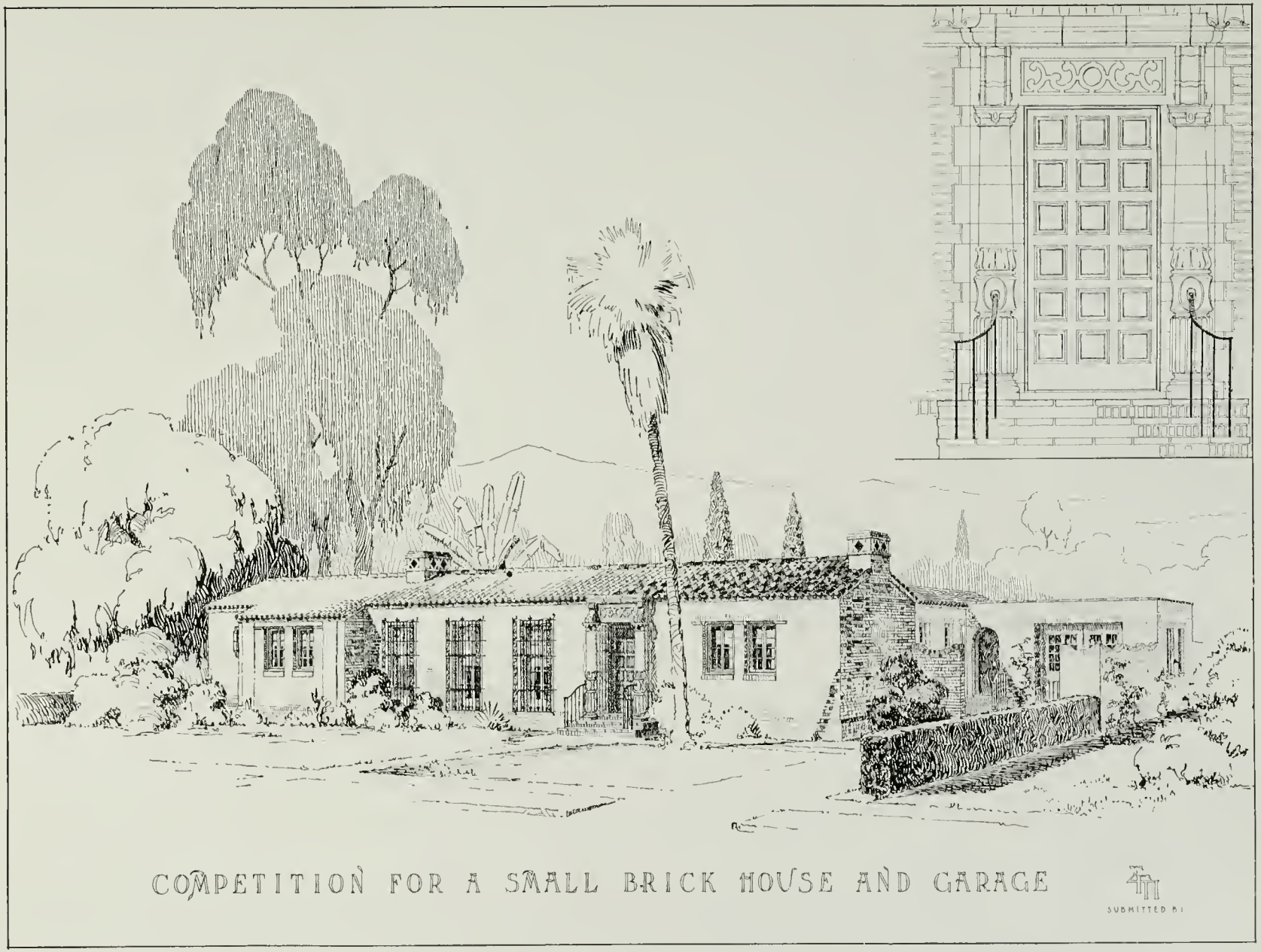
For the Southern California Chapter, A. I. A., David C. Allison.
For the San Francisco Chapter, A. I. A., Wm. C. Hays.
For the San Francisco Architectural Club, Albert Farr.
For the Clay Products Manufacturers, Oswald Speir.

First Prize.

GEORGE EKVALL, Tacoma, Wash.

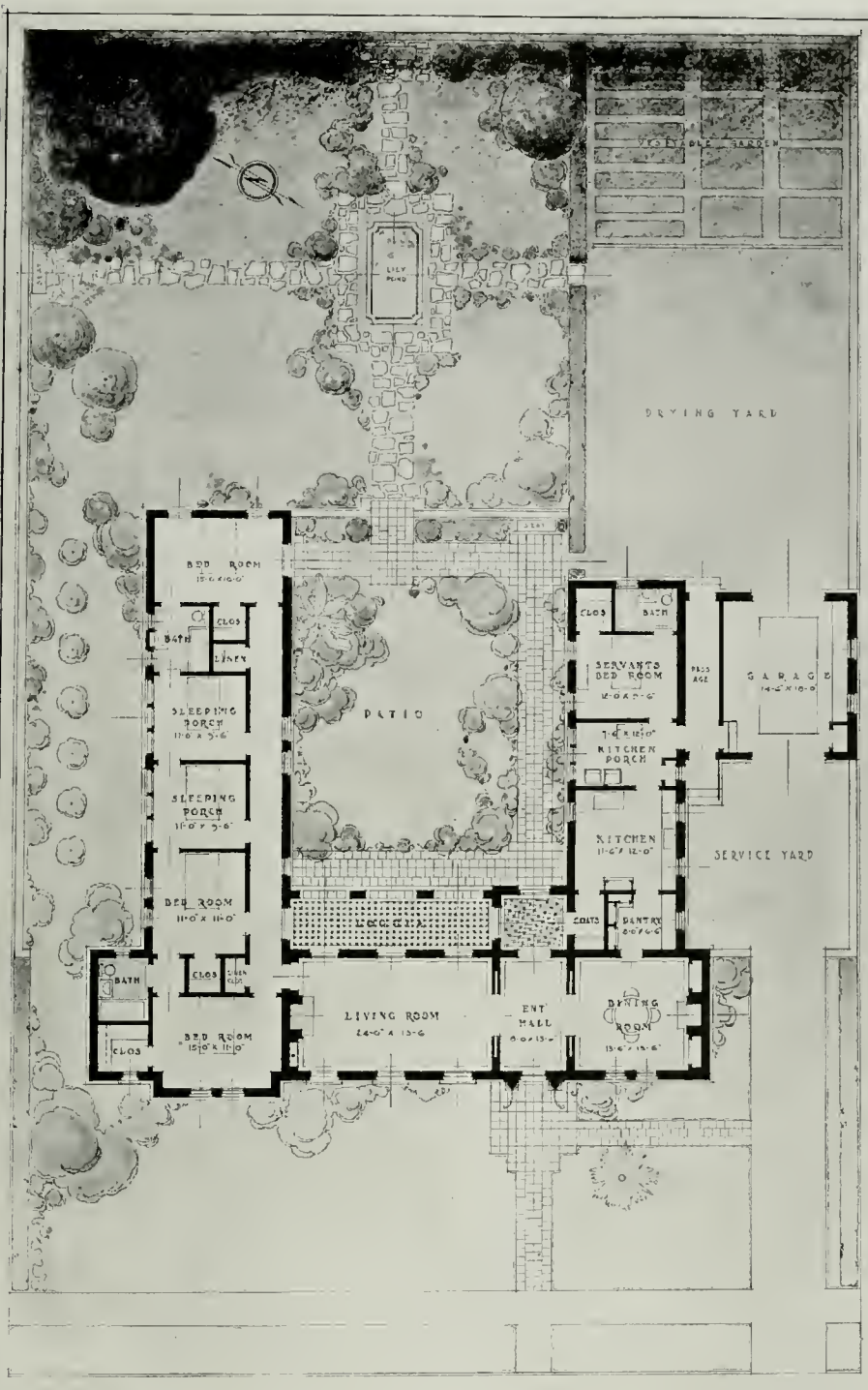


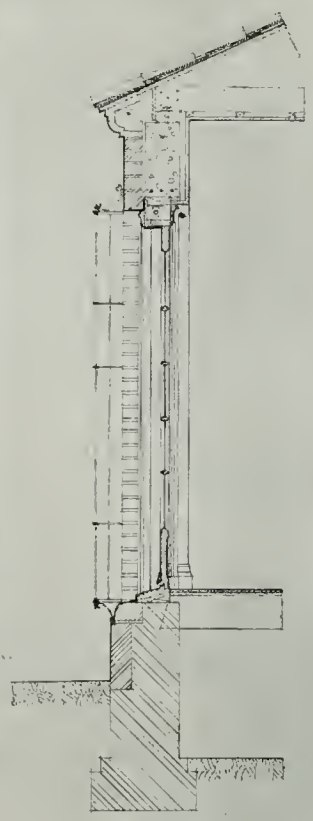
First Prize. GEORGE EKVALL, Tacoma, Wash.



Second Prize.

DONALD REUBIN WILKINSON, Los Angeles, Cal.





SECTION

PLAN

CUBAGE SCHEDULE

BEDROOM WING	17X30X12	10,200.00
MAIN HOUSE	15.5X72.5X13	14,608.75
LOGGIA	7X24X12÷4	504.00
LOGGIA VEST	7.5X9X12	810.00
SERVICE WING	14X43X12	7224.00
PASSAGE, HALF	4X20X11.5÷2	460.00
TOTAL CUBAGE		33806.75
ESTIMATED COST		.254
TOTAL COST		$8451.69
GARAGE	16X20X11.5	3680.00
PASSAGE, HALF	4X20X11.5÷2	460.00
TOTAL CUBAGE		4,140.00
ESTIMATED COST		.18
TOTAL COST		$745.20

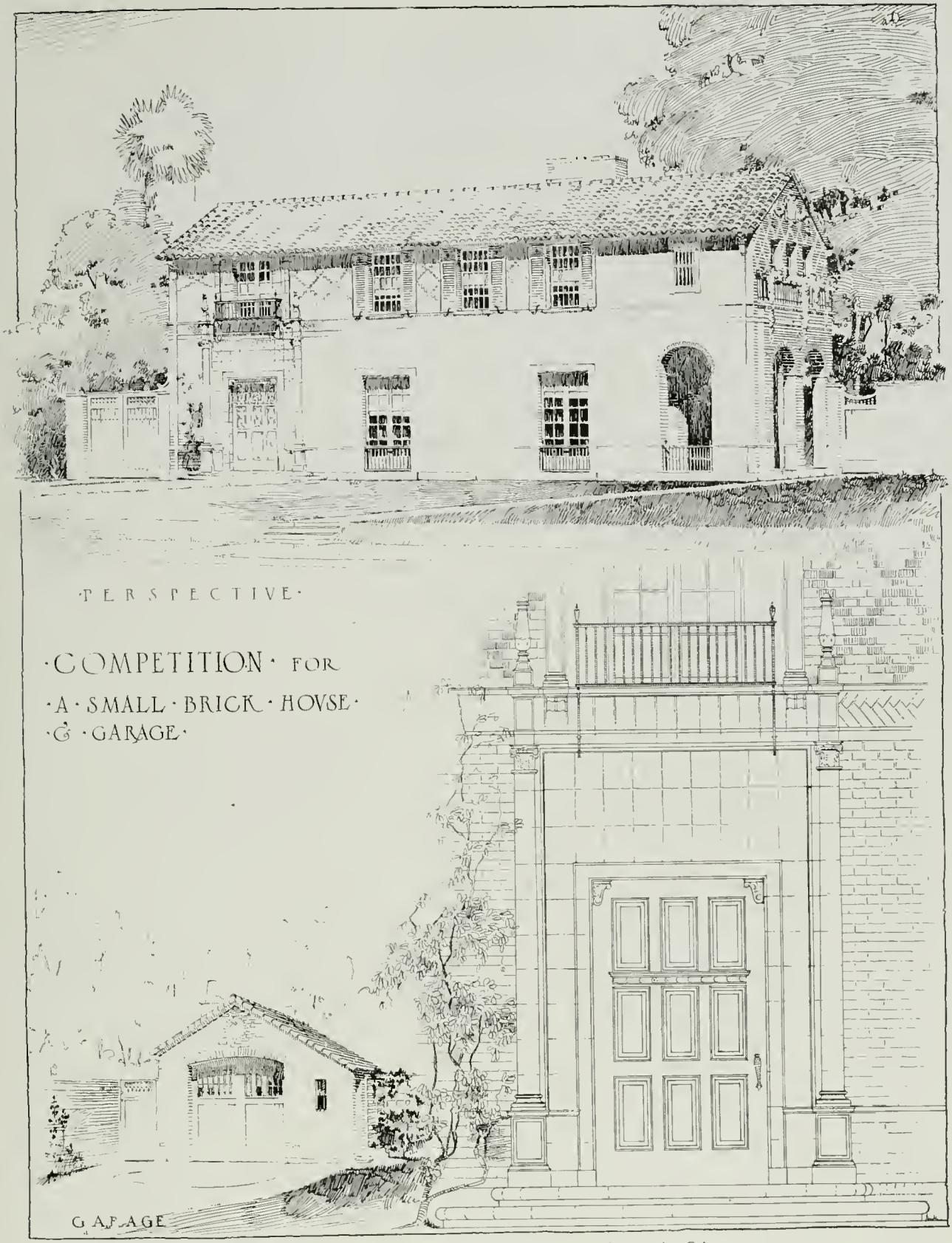
HEATED BY GAS FLOOR FURNACES

COMPETITION FOR A SMALL BRICK HOUSE AND GARAGE

SUBMITTED BY

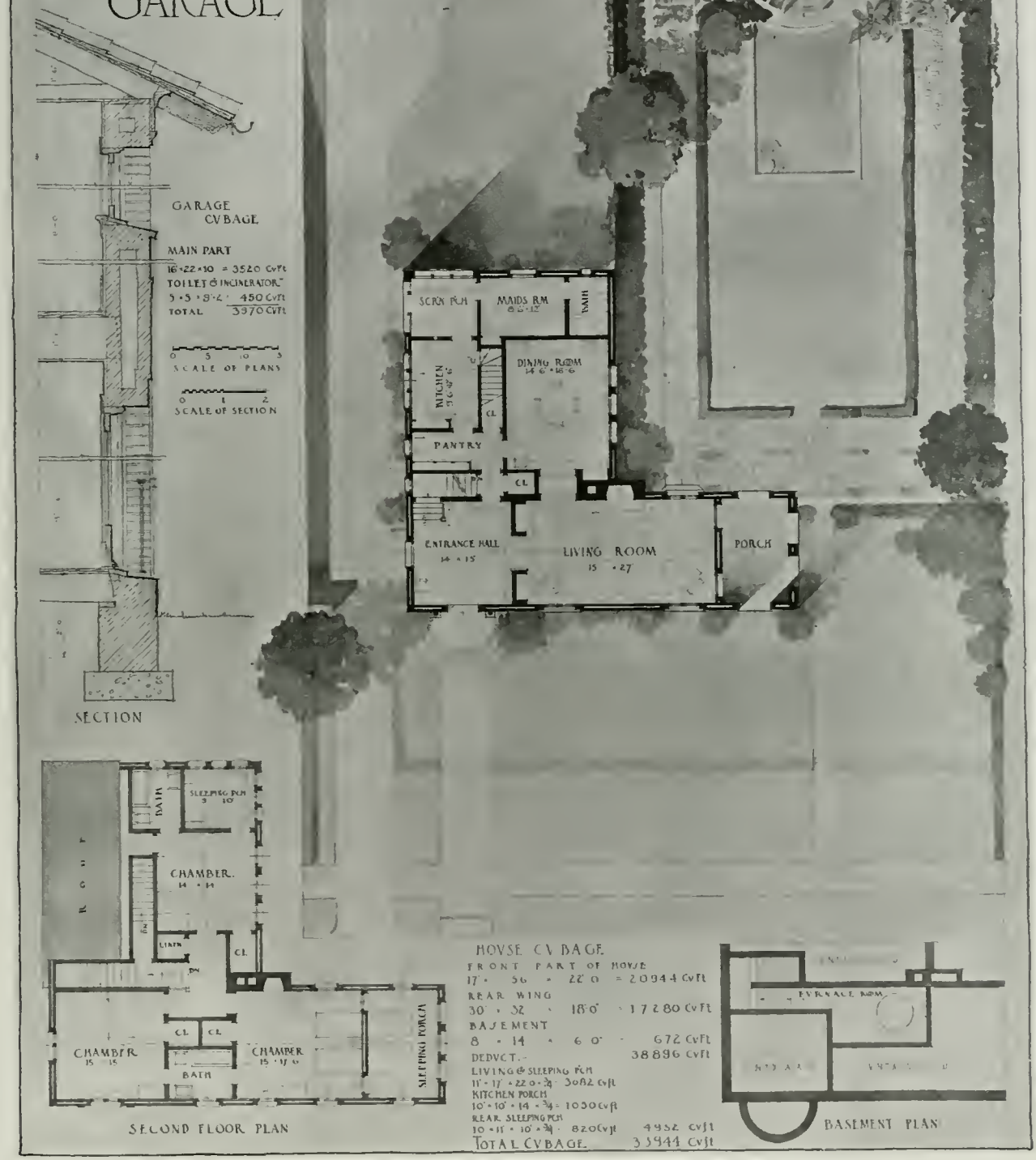
Second Prize.

DONALD REUBIN WILKINSON, Los Angeles, Cal.



Third Prize. FRANK T. KEGLEY and H. SCOTT GERITY, Architects, Los Angeles, Cal.

COMPETITION FOR A SMALL BRICK HOUSE AND GARAGE



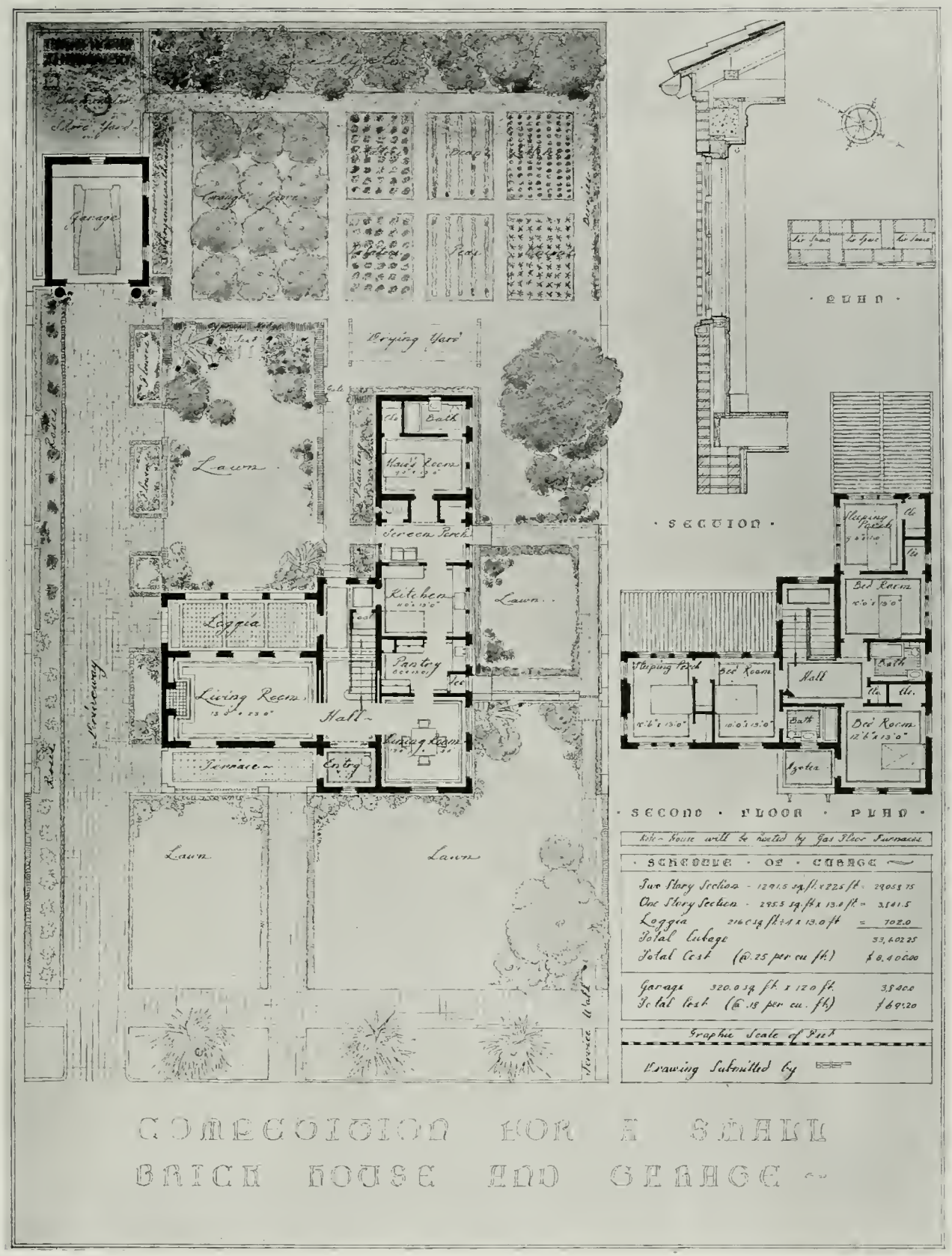
Third Prize.

FRANK T. KEGLEY and H SCOTT GERITY, Architects, Los Angeles, Cal.

COMPETITION FOR A SMALL BRICK HOUSE AND GARAGE

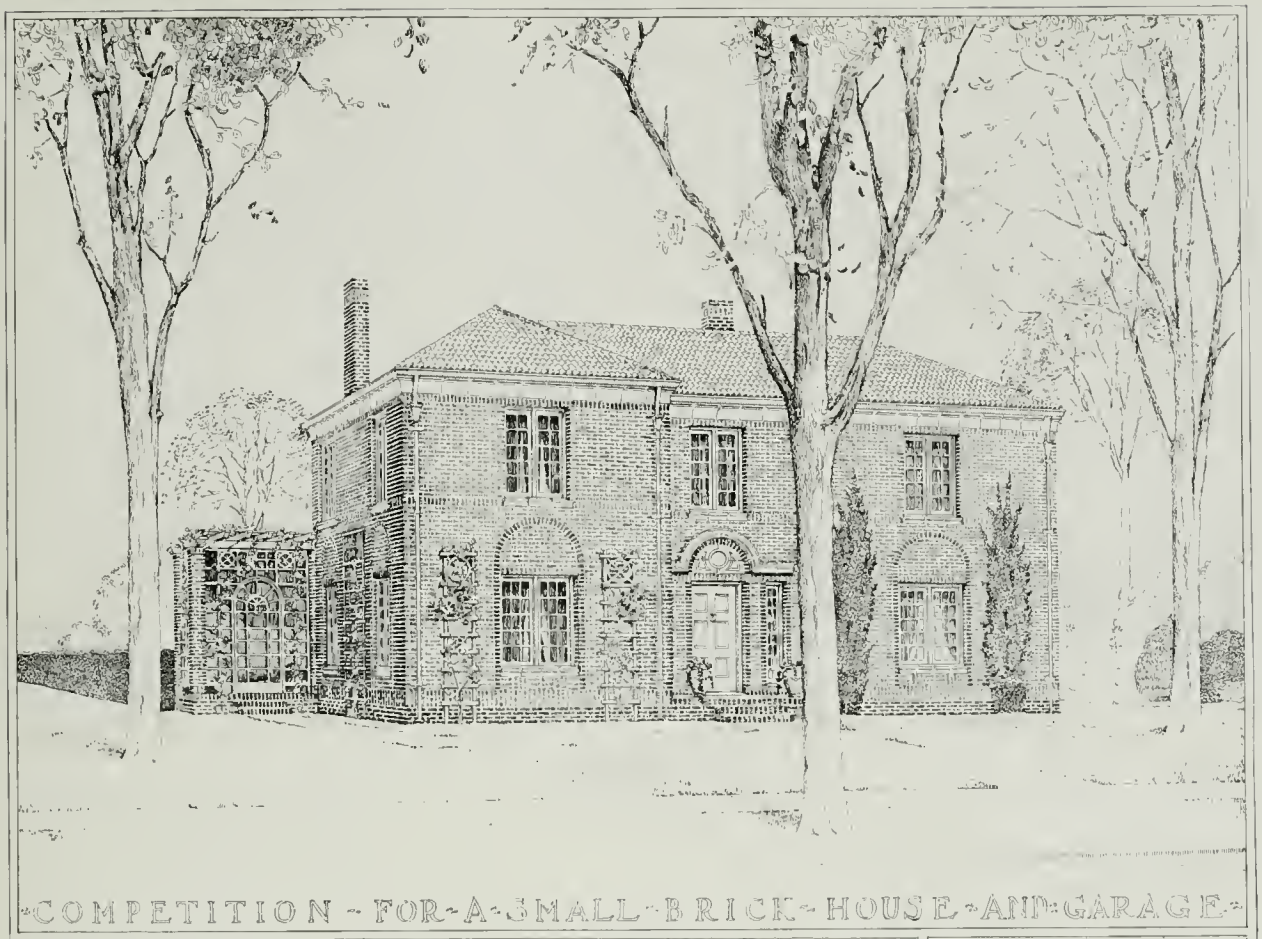
Fourth Prize.

JOE WESTON, Los Angeles, Cal.

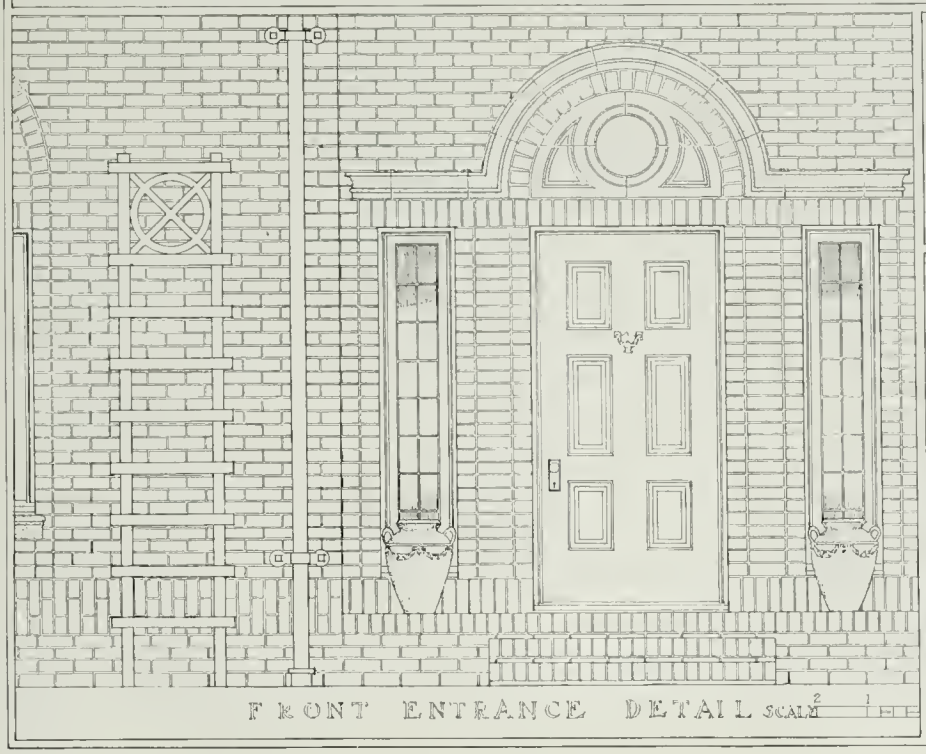


COMPETITION FOR A SMALL BRICK HOUSE AND GARAGE

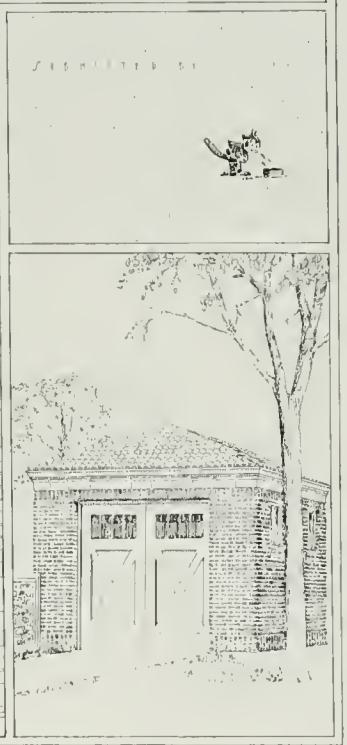
Fourth Prize. JOE WESTON, Los Angeles, Cal.



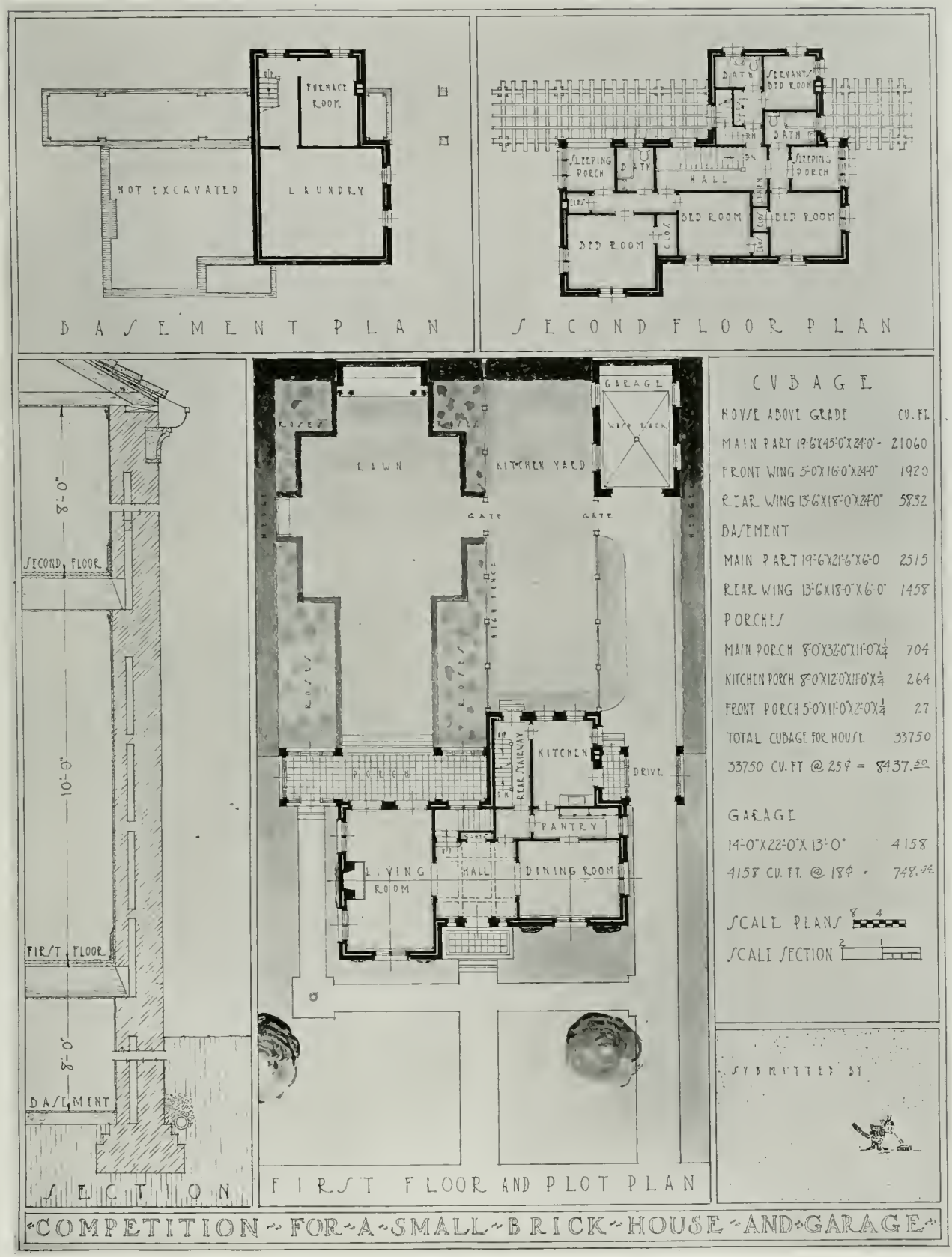
COMPETITION - FOR - A - SMALL - BRICK - HOUSE - AND - GARAGE



FRONT ENTRANCE DETAIL SCALE



Fifth Prize. H. A. MOLDENHOUR, Seattle, Wash.



COMPETITION - FOR - A - SMALL - BRICK - HOUSE - AND - GARAGE

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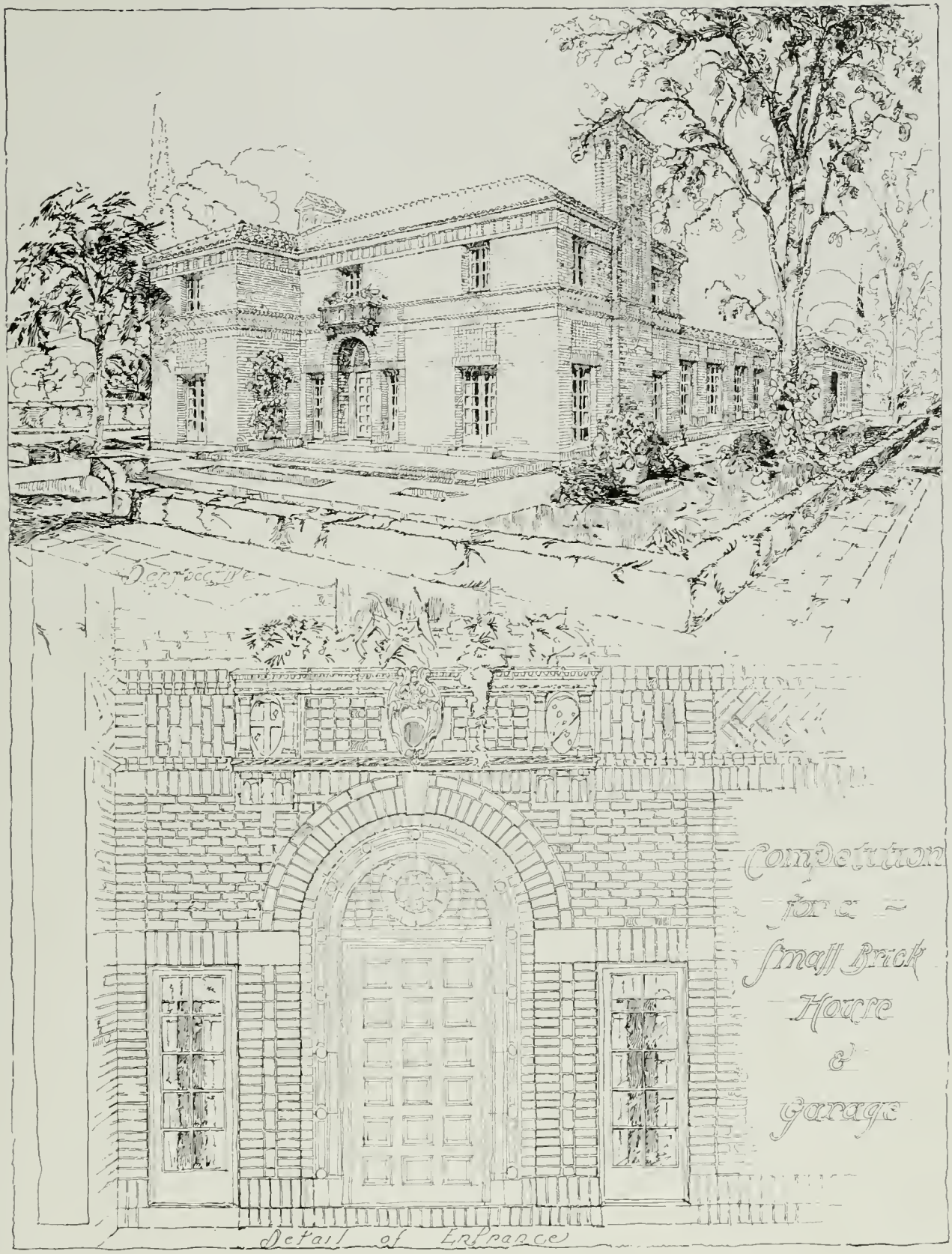
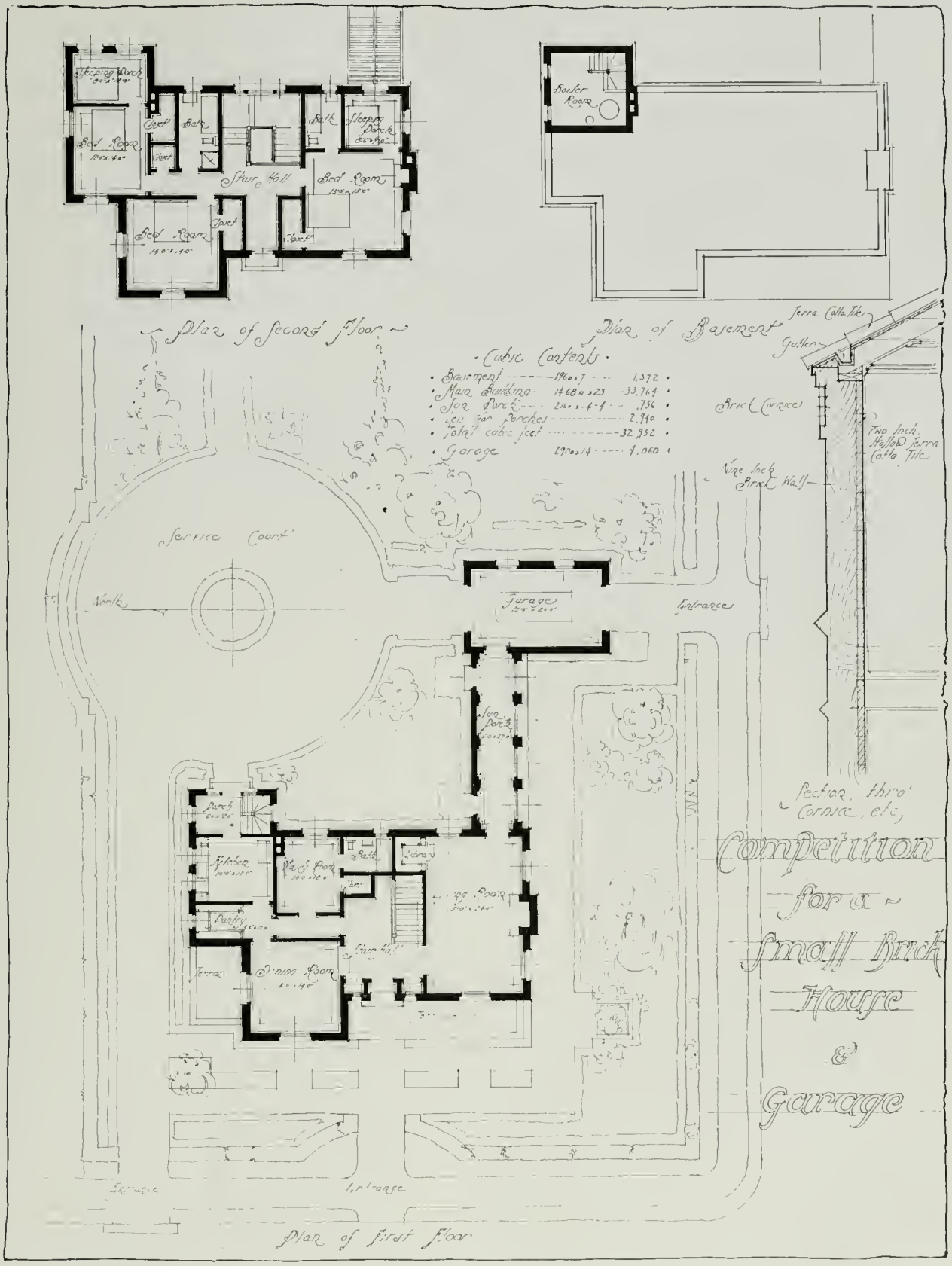
H. A. MOLDENHOUR, Seattle, Wash.

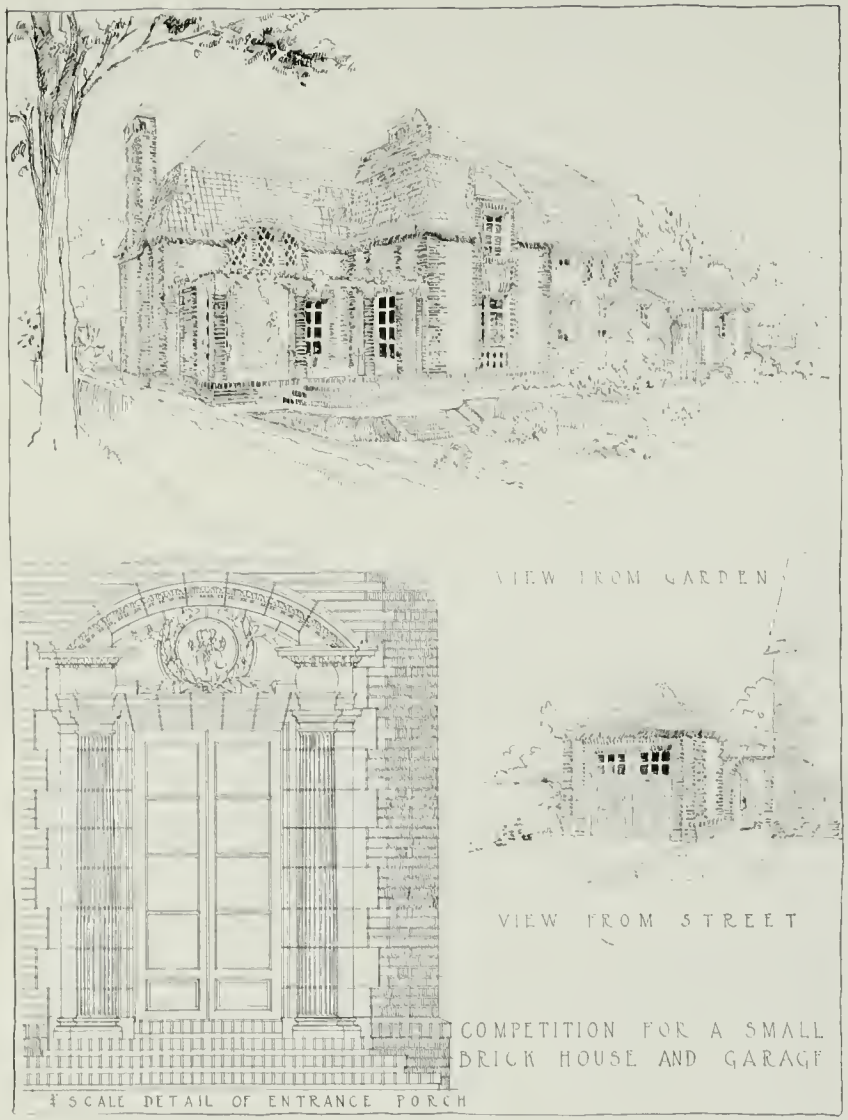


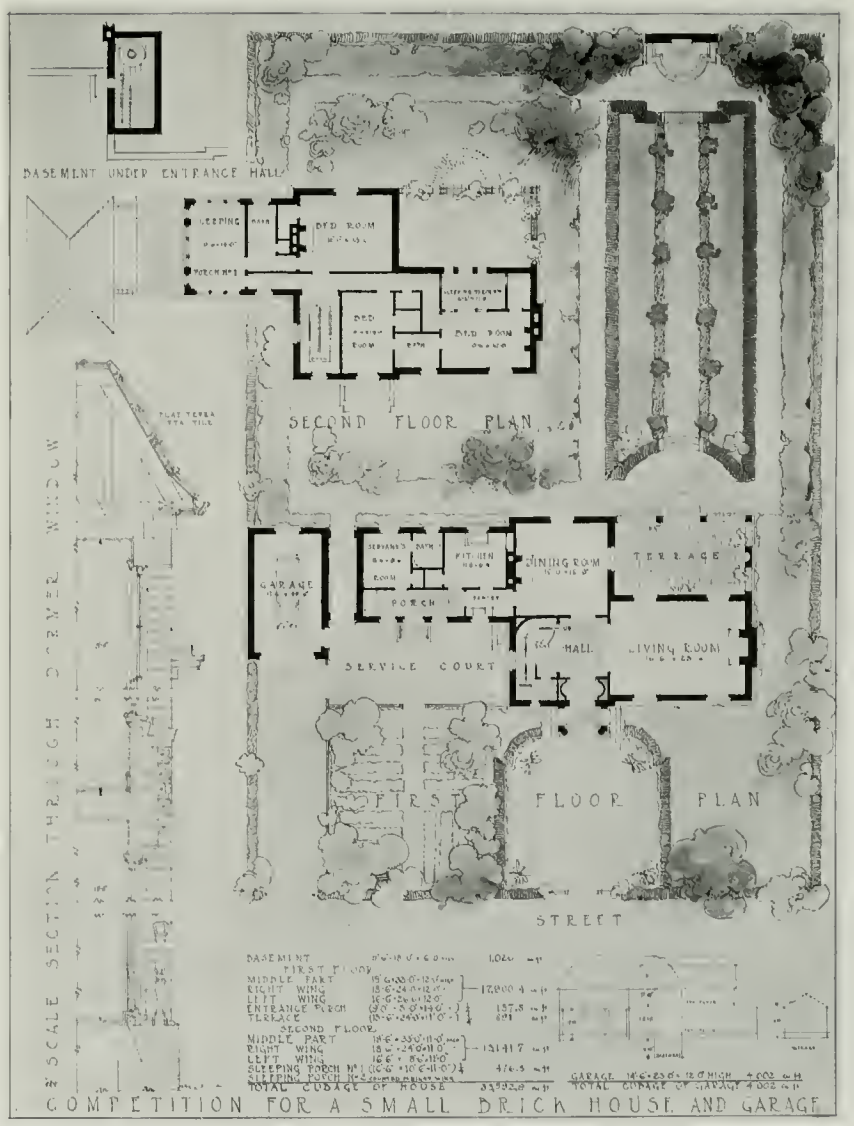
Sixth Prize.

HARRY M. MICHELSEN, San Francisco, Cal.



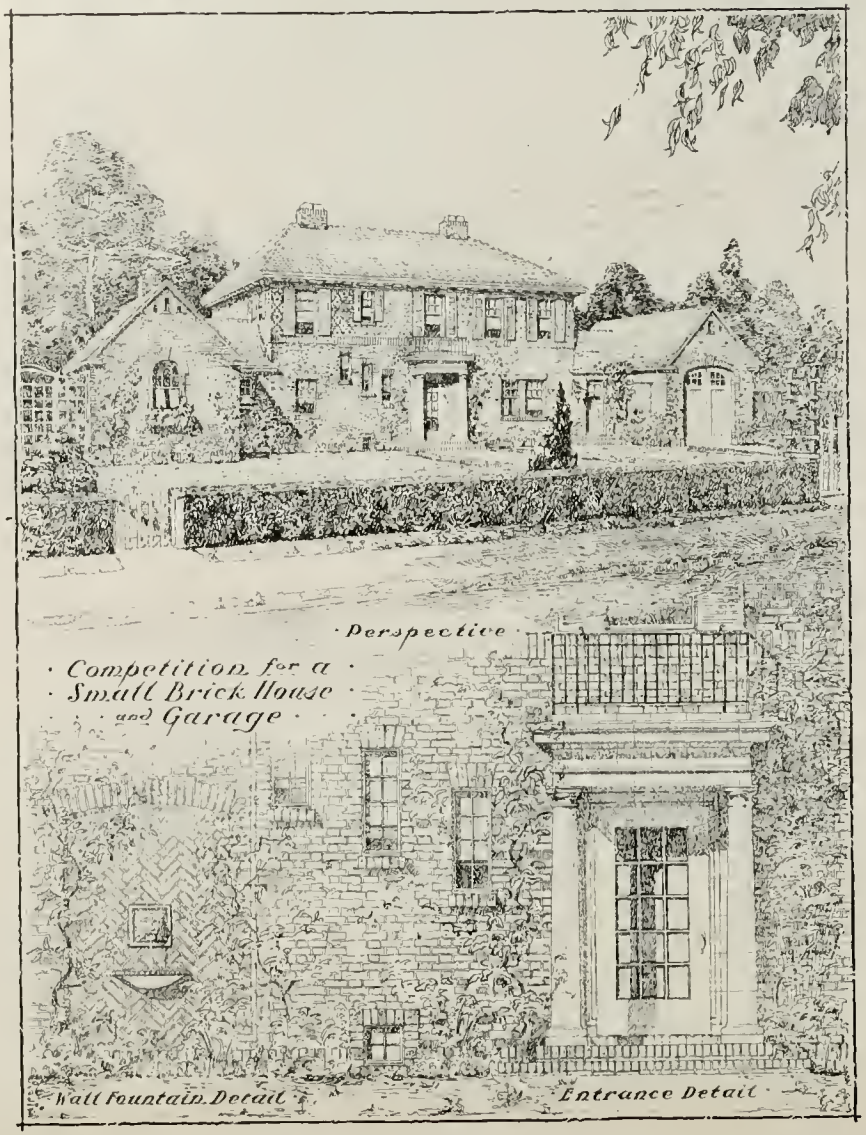
Sixth Prize. HARRY M. MICHELSEN, San Francisco, Cal.

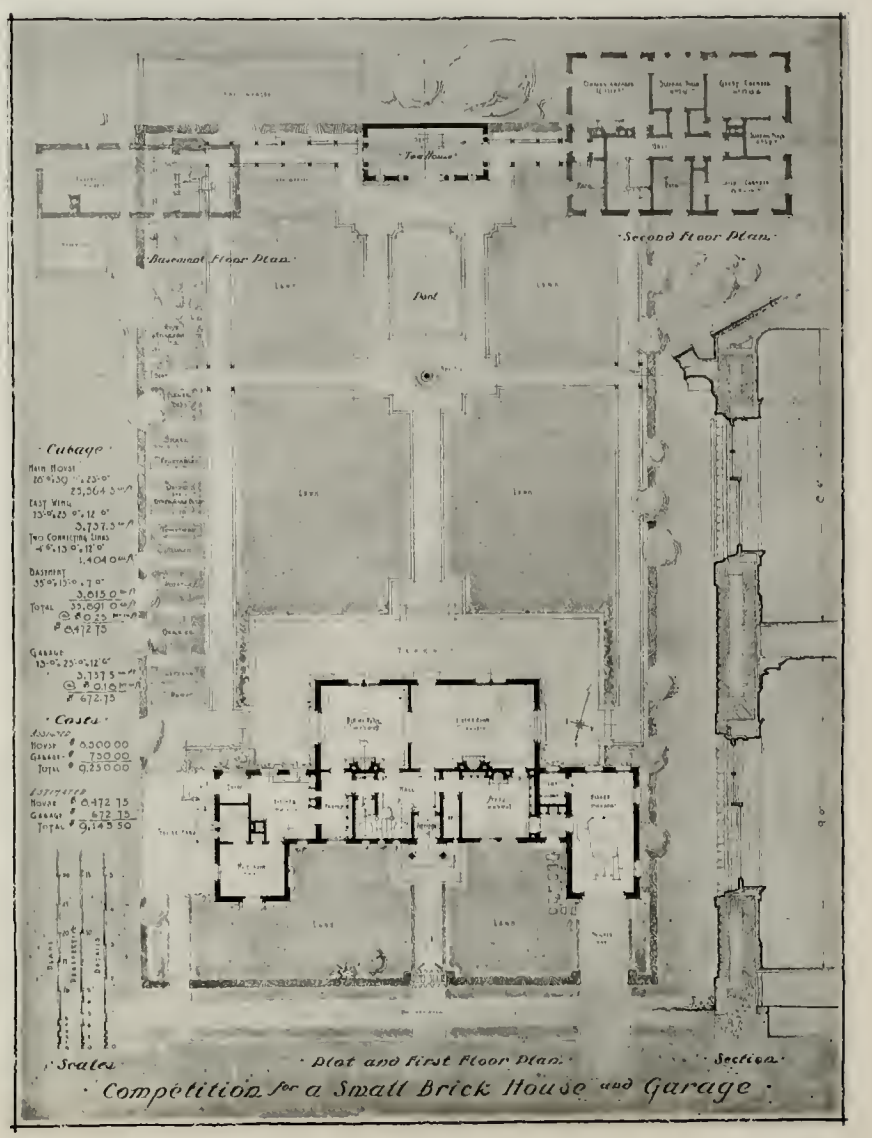




First Honorable Mention.

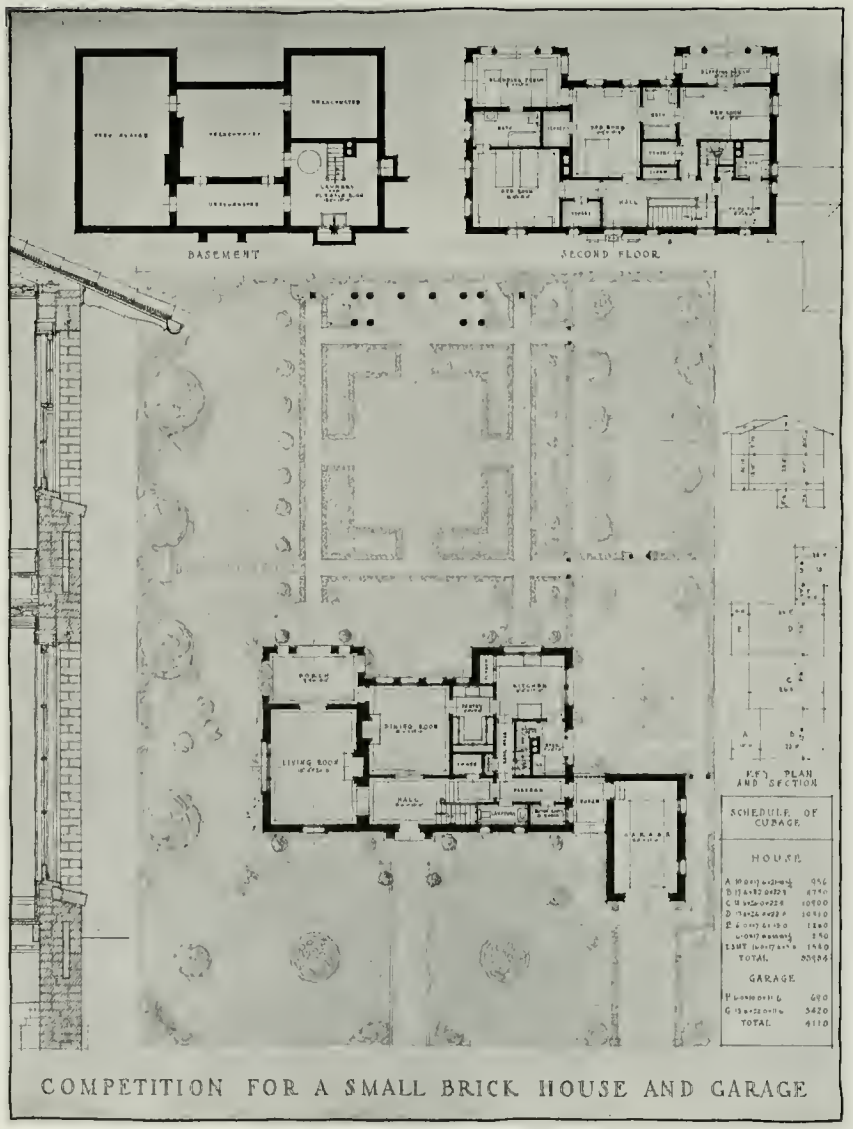
EDWARD L. FRICK. San Francisco, Cal.



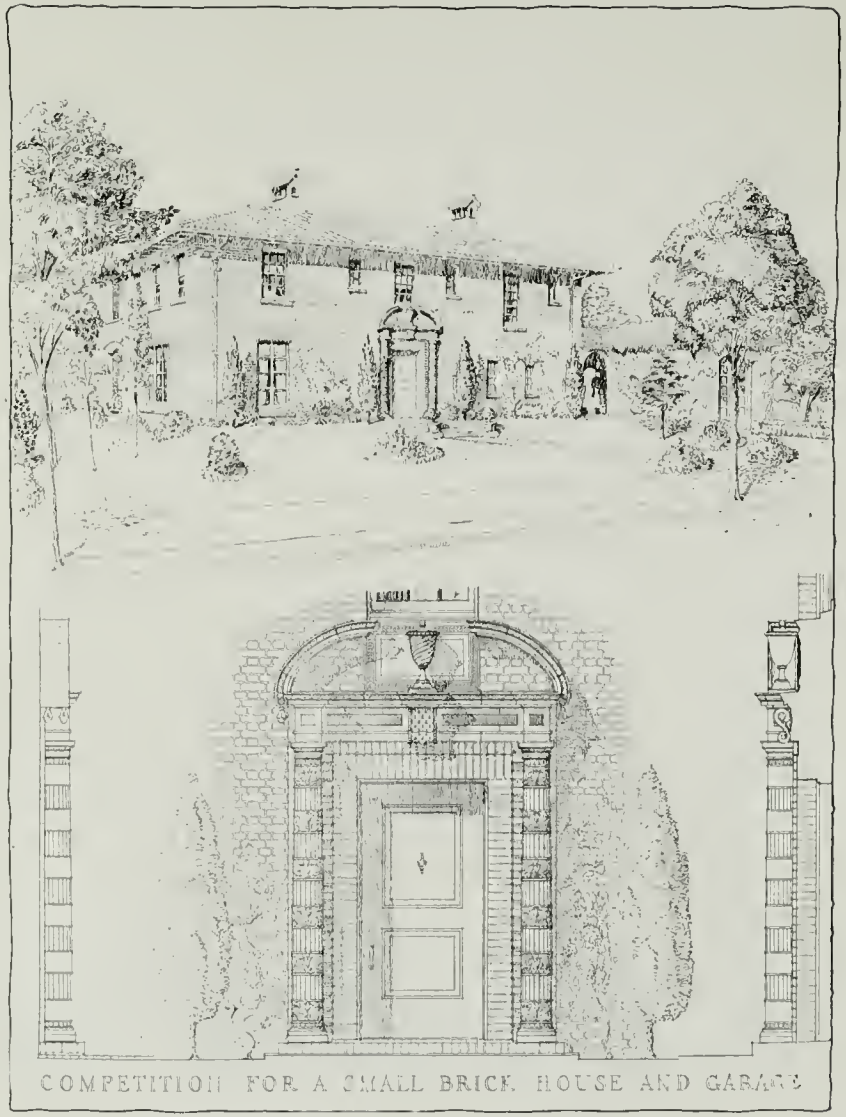


Second Honorable Mention.

E. D. FLYNN and W. P. STEPHENSON, Berkeley, Cal.



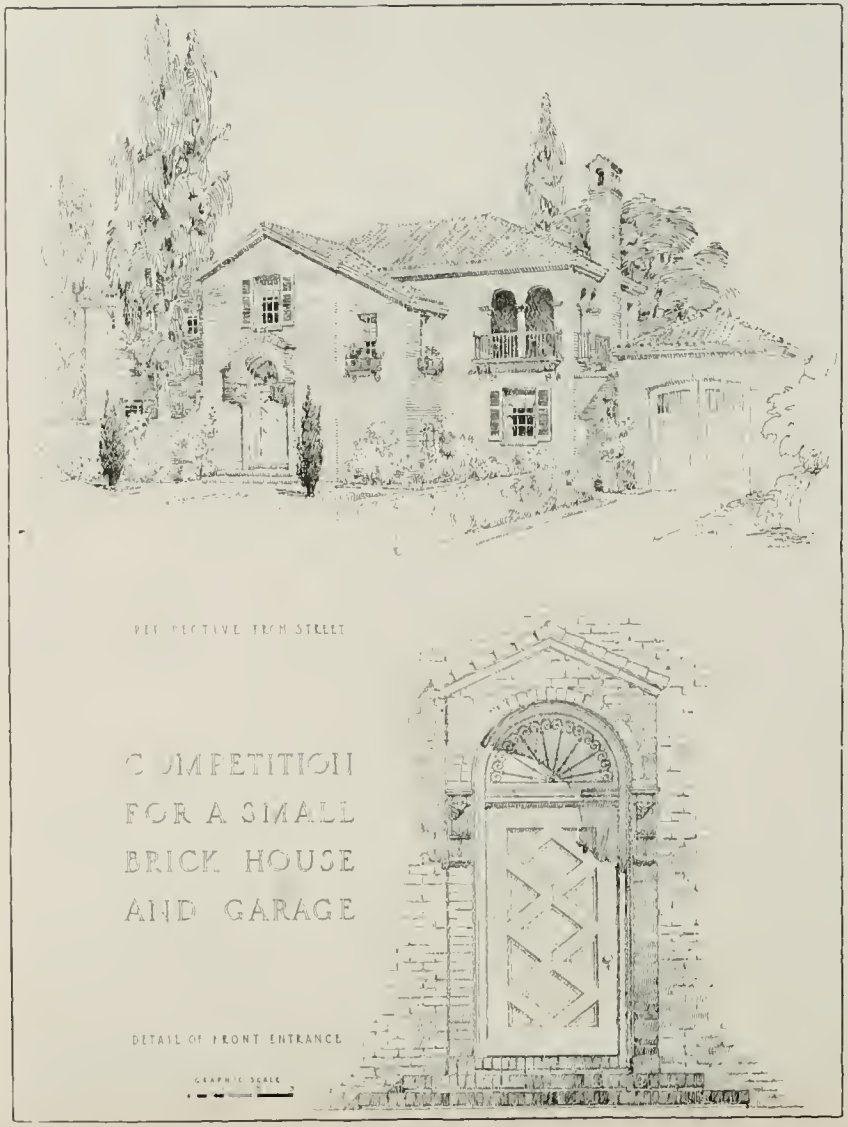
COMPETITION FOR A SMALL BRICK HOUSE AND GARAGE

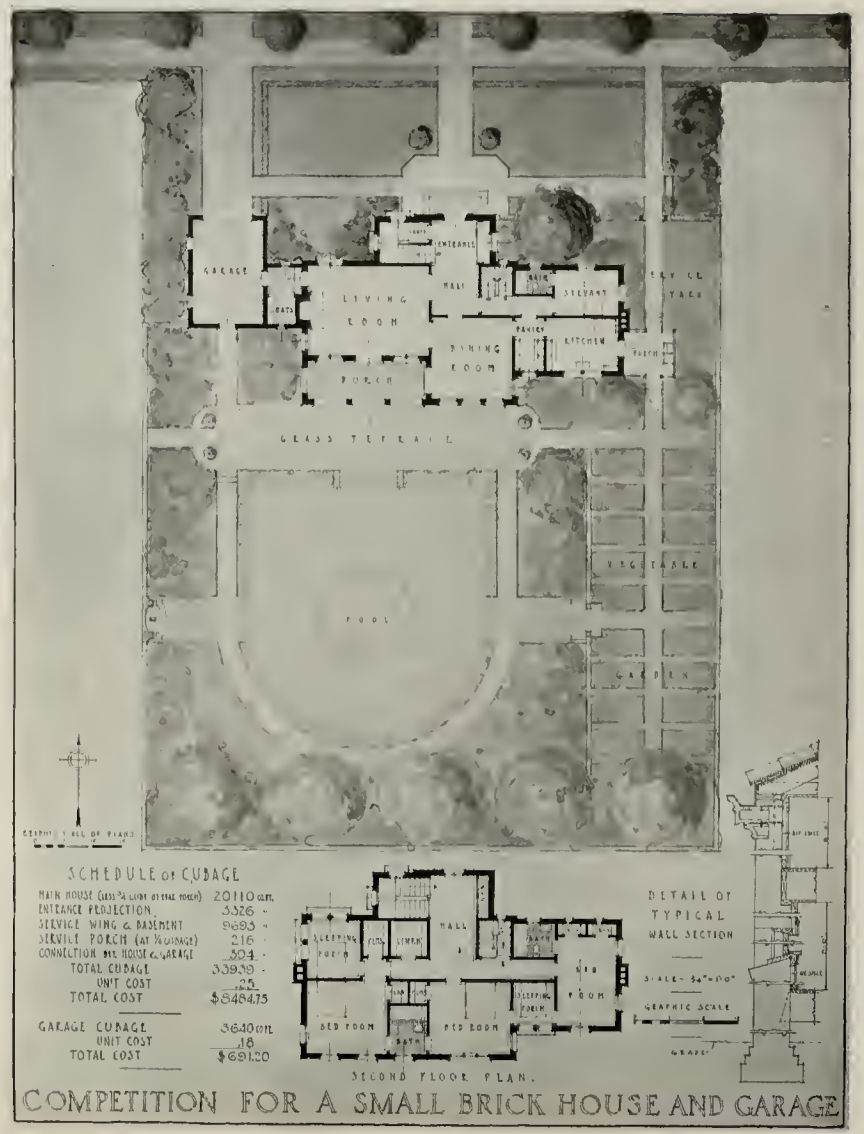


COMPETITION FOR A SMALL BRICK HOUSE AND GARAGE

Mention.

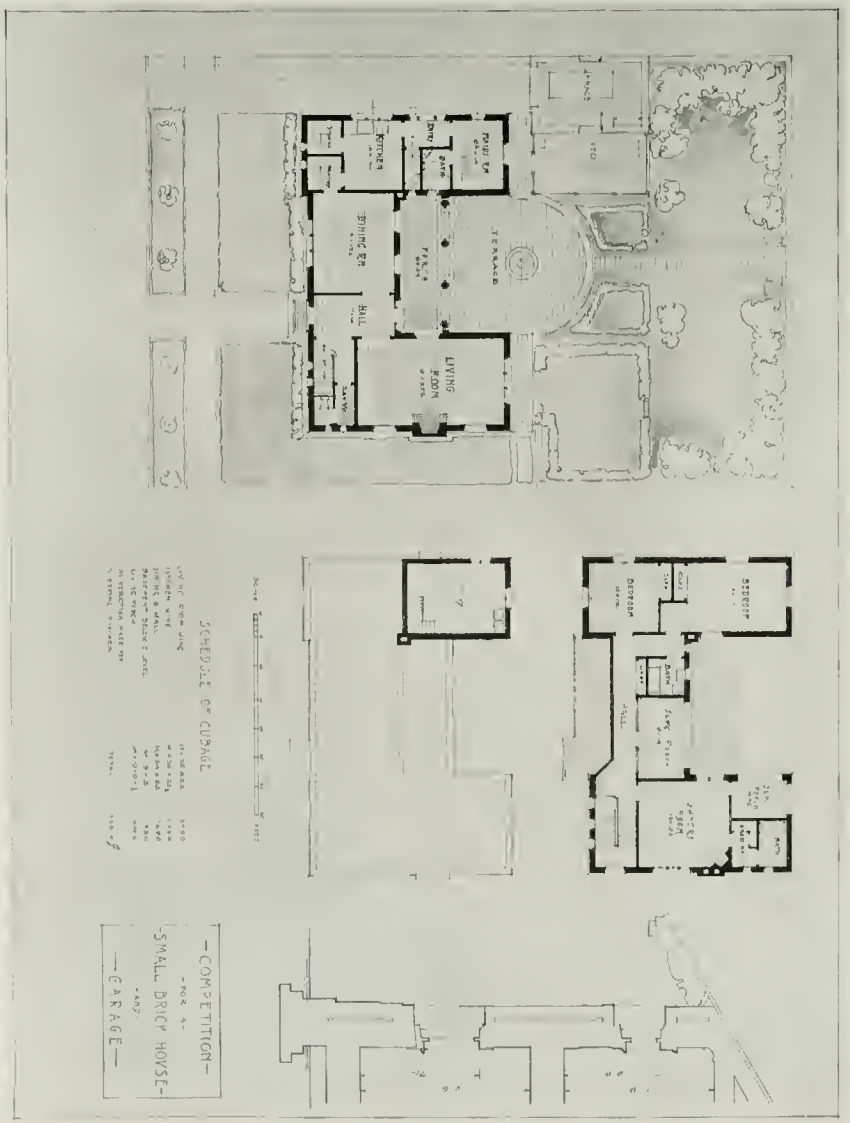
E. B. HURT, San Francisco, Cal.

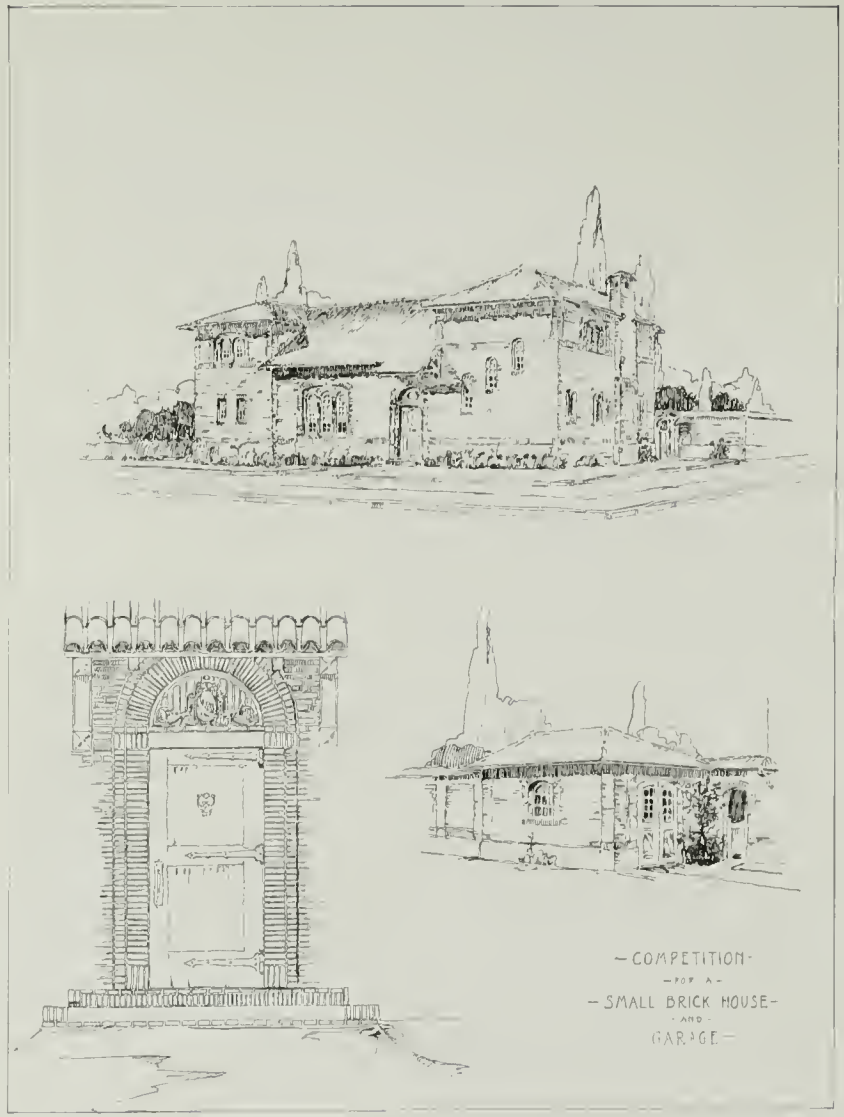




Mention.

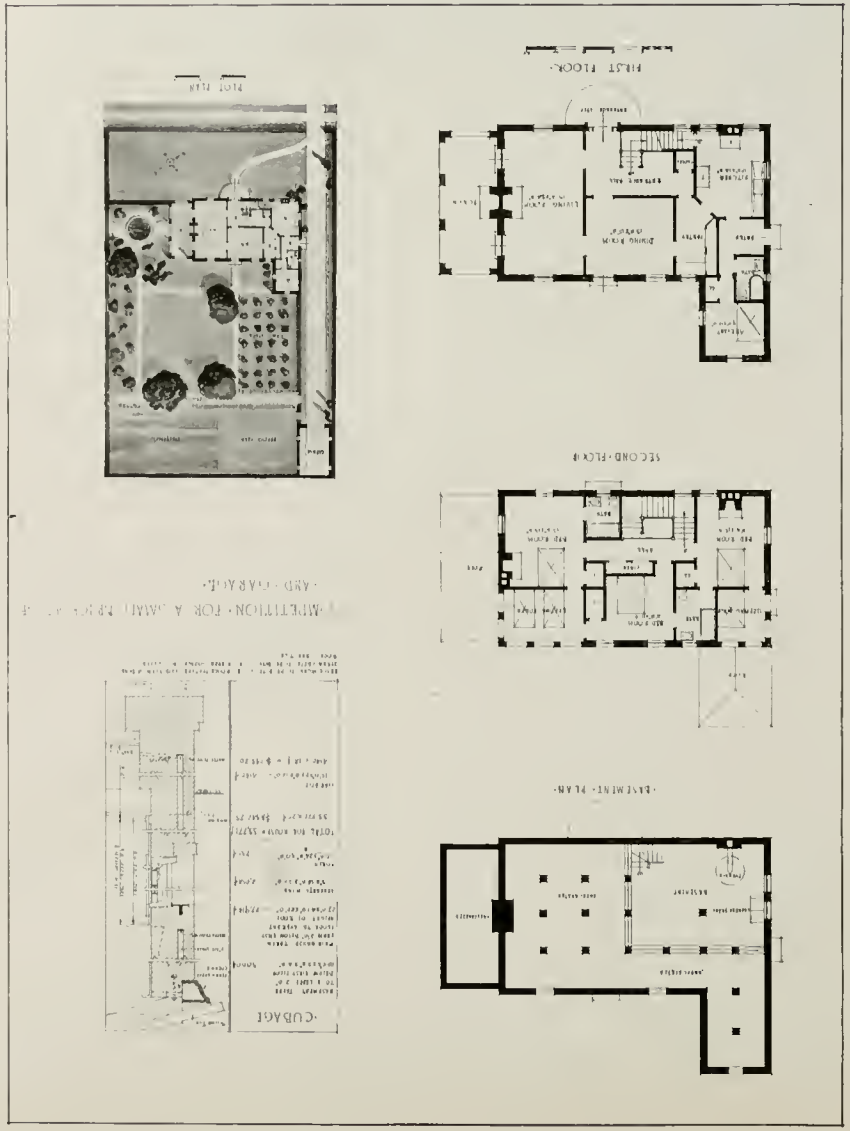
RAYMOND W. JEANS, Oakland, Cal.

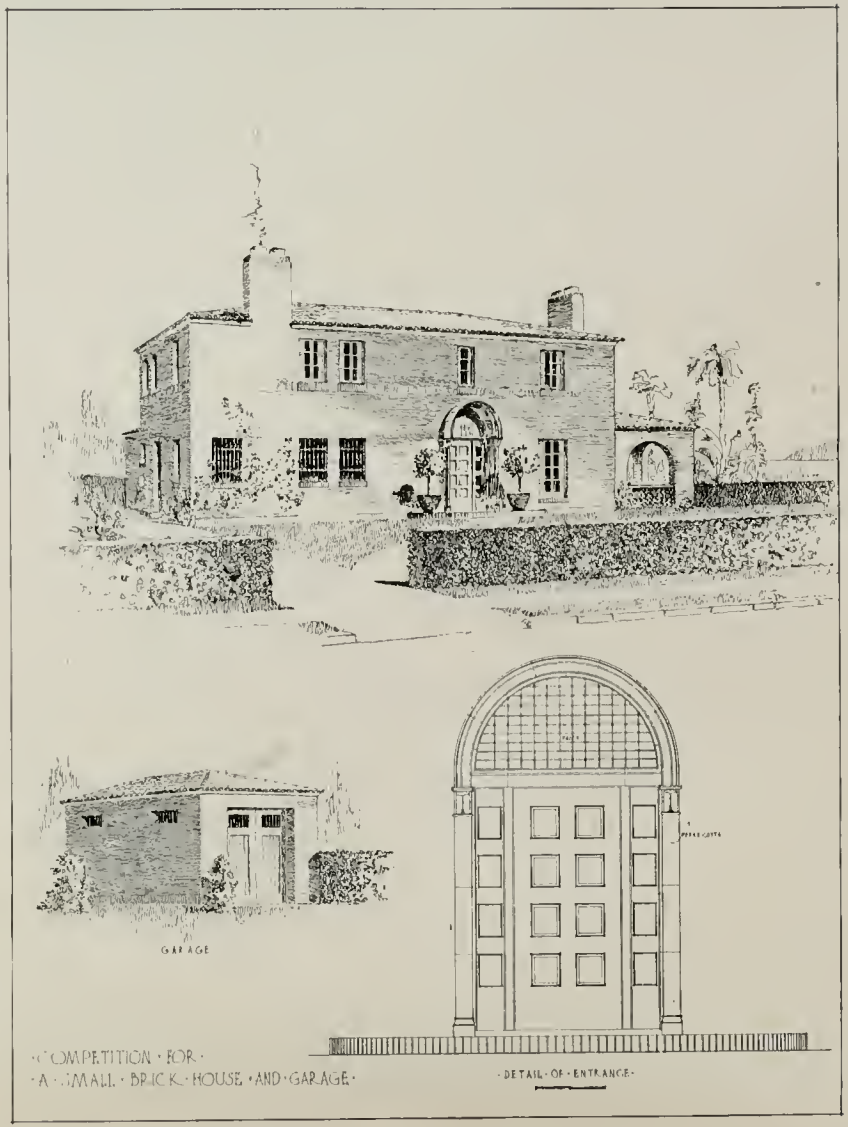




Mention.

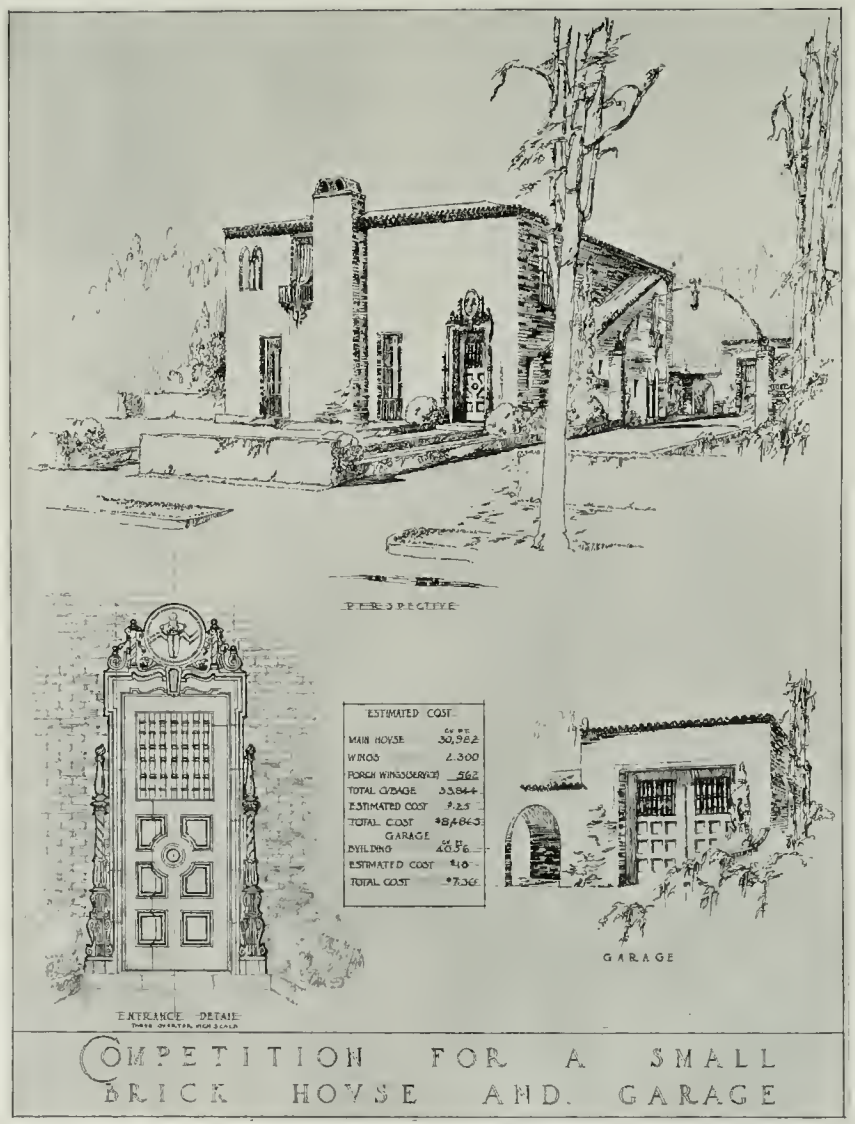
JOHN E. McGUISE and JOHN J. STANTON, Bremerton, Wash.



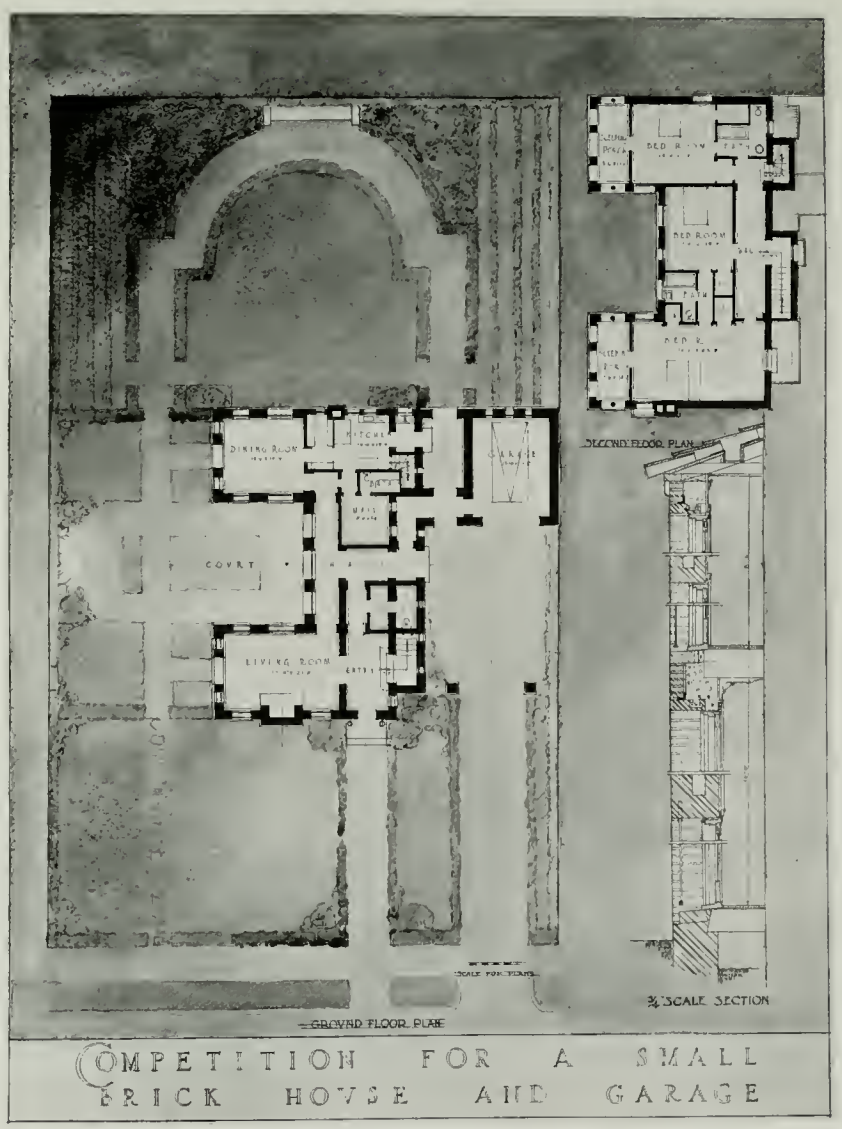


Mention.

ALFRED NIBECKER, Los Angeles, Cal.



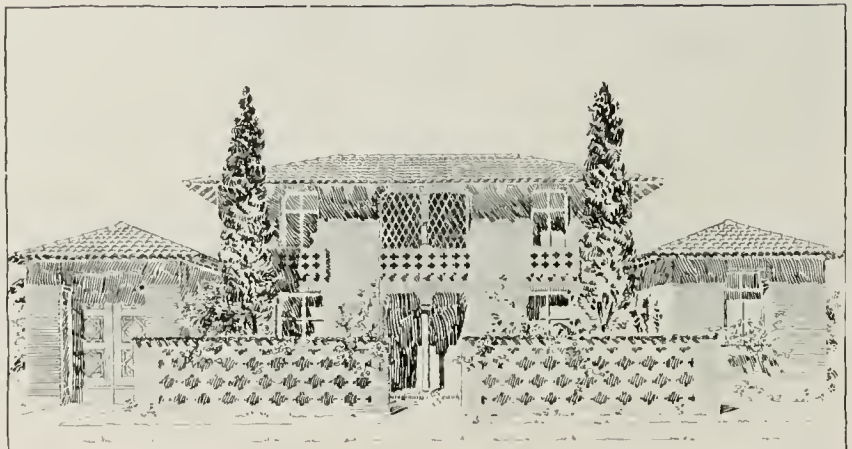
COMPETITION FOR A SMALL BRICK HOUSE AND GARAGE



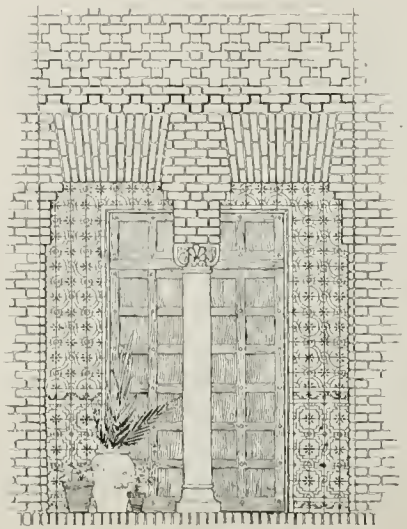
COMPETITION FOR A SMALL BRICK HOUSE AND GARAGE

Mention.

GENE VERGE, Los Angeles, Cal.



Perspective View



Detail of Entrance

View looking toward Garage

Competition for a Small Brick House and Garage

First Floor Plan

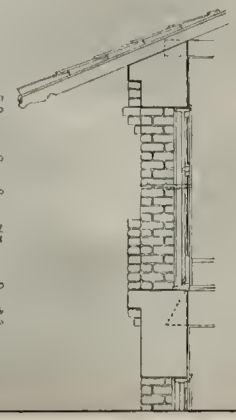
Second Floor Plan

Basement

SCHEDULE OF CUBAGE

MAIN PORTION
2 STORIES HIGH
25 X 45 = 1050 SQ FT CU FT
X 26 HIGH = 27300
KITCHEN WING
1 STORY HIGH
12 X 30 = 360 SQ FT
X 15' HIGH = 5400
SLEEPING PORCH NO 2
5 X 12 = 60 SQ FT
X 10 HIGH = 600 ÷ 4 = 150
BASEMENT
12' 8" = 16 2/3 SQ FT
X 9' HIGH 762
TOTAL 33612

GARAGE
18 X 21' = 252 SQ FT
X 15 HIGH 5760
GARDEN WALL
46' 3 6" X 1' 276
TOTAL 6036



Competition for a Small Brick House and Garage

Mention.

ERNEST E. WEIHE, San Francisco, Cal.

Mr. Clay Products' $8,500 House

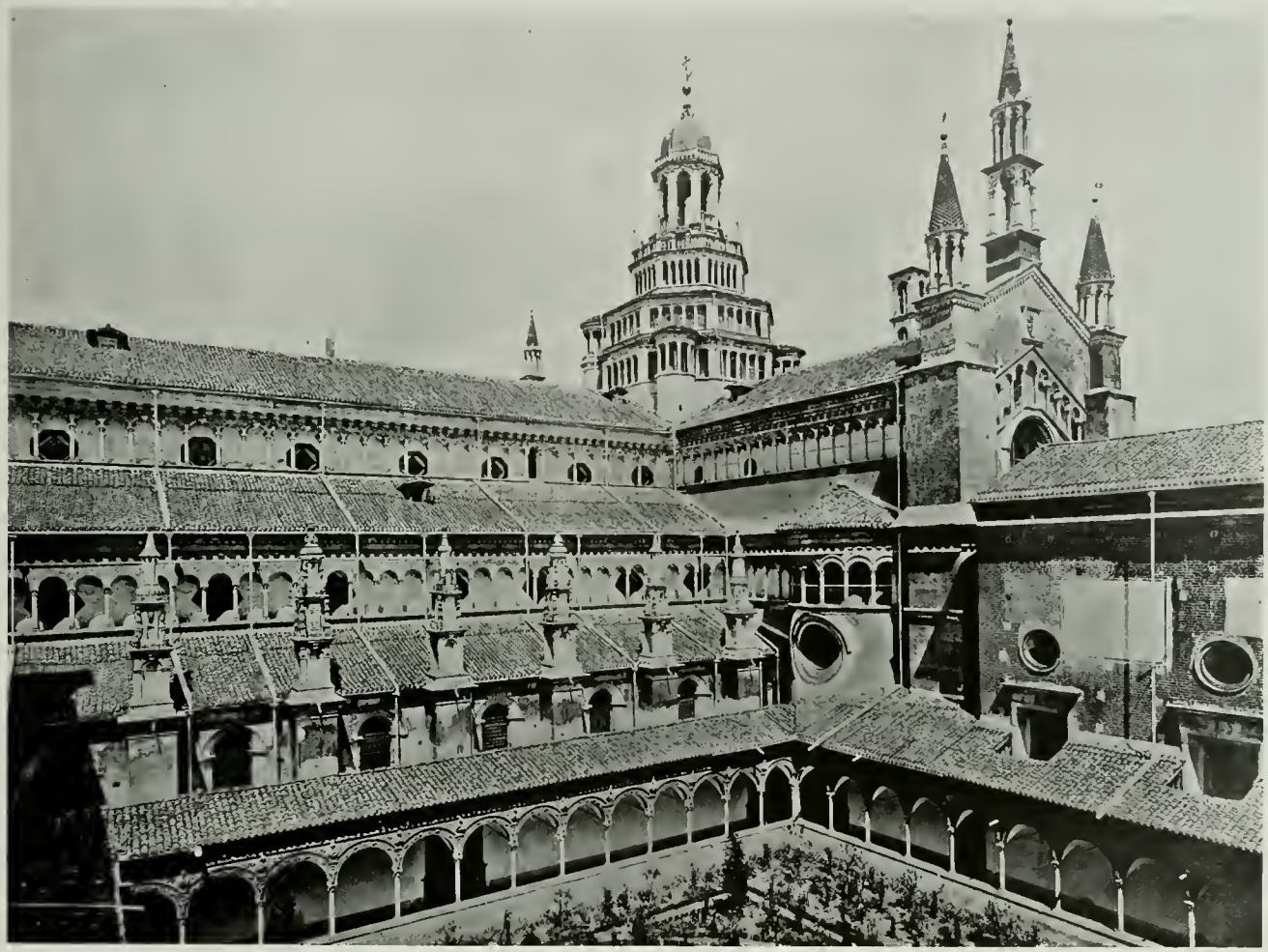
By OSWALD SPEIR

A NUMBER of clay products manufacturers recently assumed the role of client and requested THE ARCHITECT to procure for them a suitable design for a modest dwelling, to cost not more than $8,500. The client was willing to use as much of one hundred by one hundred and fifty feet of property as was necessary to give him a comfortable home and suggested certain accommodations as to the number of rooms, baths, etc., etc. He naturally wanted a garage for one machine and a garden laid with proper esthetic relation to his house; but did not require that the property, garage or garden be considered in the cost mentioned. He might decide that he would sell his machine and buy war bonds, and plant his garden to potatoes and other preparedness and vegetarian diet. However, he naturally wished his house so designed and placed that it would be in perfect scale with its surroundings. The garage could, of course, add an interesting note to the composition.

Mr. Clay Products, having been born, bred and brought up in California—in fact, having grown out of its very soil, one might say—has been imbued with its great, big, broad spirit, has become a part of its wonderfully temperamental atmosphere, and therefore further mentioned to THE ARCHITECT that he should have his home spot "suitable to the climatic and landscape conditions of California."

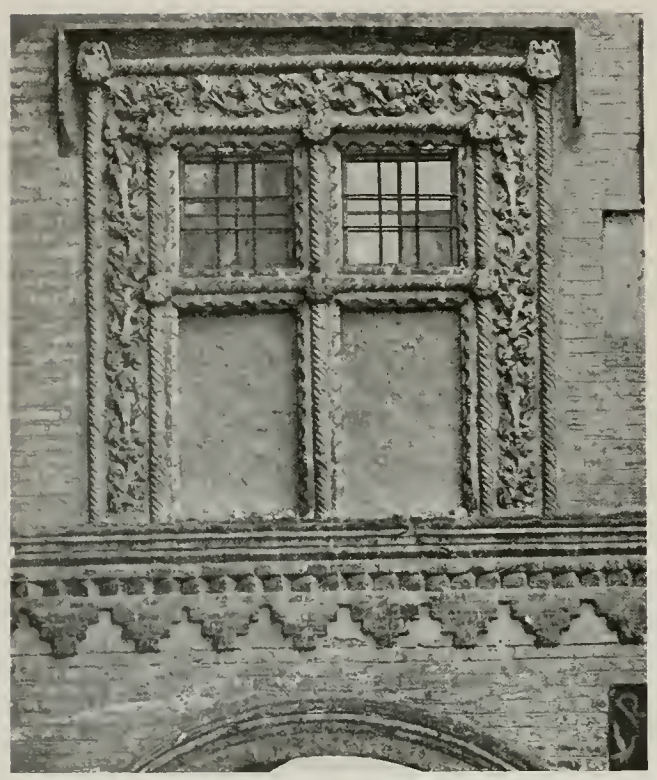
Surely nothing could give THE ARCHITECT broader inspiration. Might his imagination not roam from the shack of his brother of the mountains to the hacienda of his tropical neighbors; from the great metropolis of the East, with its smartly gardened suburbs, to the romantically picturesque villas of the Riviera; from the chalets of the great snow-capped Alps to the mystic plains of Algiers? Broad as this dream, how California breathes, to those who love her, the essence of the best of it all!

And as applied to home, how it spells, first, culture and refinement, and then logical circulation and all of those conveniences that add to our physical ease. It means an orderly garden placed on proper axis, picturing from principal rooms—easy of access and lur-

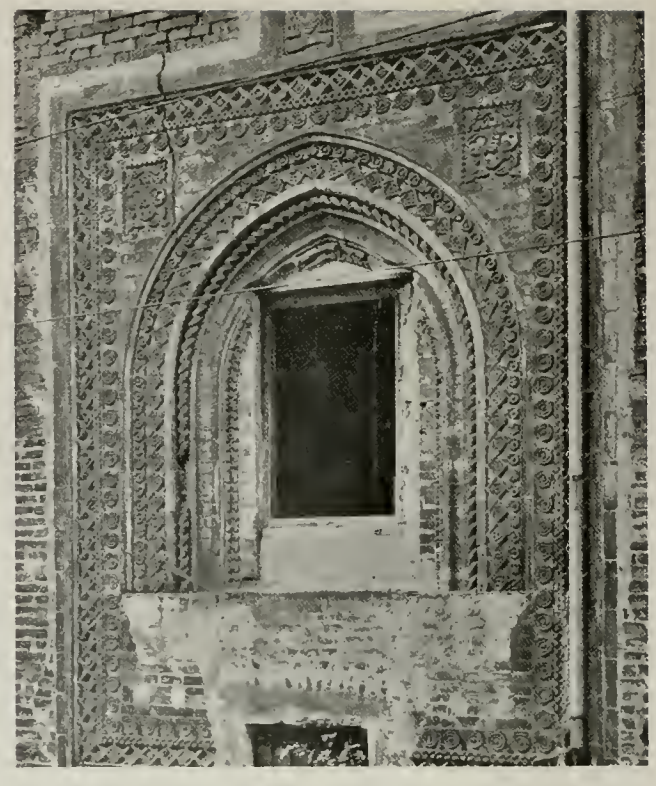


CERTOSA DI PAVIA

The most complete example of the use of Clay Products. Containing almost every type of material much of which in method and unit is applicable to modern use and construction.



Window in Terra Cotta, Priorato Di S. Orso, Aosta.
From The Brickbuilder



Window in Terra Cotta, Palazzo Della Porta, Novara.
From The Brickbuilder

Suggestion for simple Terra Cotta Arch to Colonade Clever use of standard unit brick belt course. Indication delightfully plastic Architectural Terra Cotta window trim.

ingly inviting on those many rare days and nights that are within our "climatic conditions." Then, too, it demands the consideration of extremes—that the cold of winter may be economically tempered to its inmates and that the heat of summer may not too glaringly penetrate. Mr. Clay Products, being a Californian, required no Rooseveltian lecture to produce his modest family, and his home must afford arrangement for mutual comfort. They must feel no overexposure to outsiders when Clay Products is obliged to be abroad.

Mr. Clay Products modestly suggested to THE ARCHITECT that he would rather like it if his house were designed for brick construction and esthetically treated and trimmed with such products of clay as seemed most suitable. By all means must he have a clay tile roof; for not only must it be beautiful, but as well thoroughly protective against "climatic conditions" and fire. Thus, with his clay walls and roof, will he be thoroughly shielded from heat and cold, storm and fire.

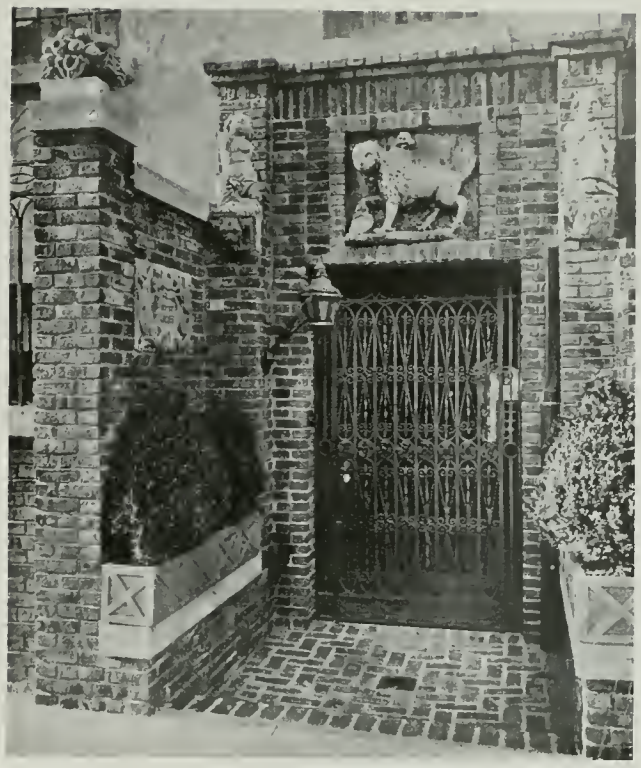
THE ARCHITECT, grasping the possibilities of his problem, gathered about him wise and trained minds of the great A. I. A. and solemnly and in duly prescribed and approved form, invited many young men, without age limit, to assist them in the solution. THE ARCHITECT most generously offered to give to these young men all of his fees—something over $1,150.00—(save a few shekels for a modest luncheon to his advisers) in such amounts and sequence as should be merited by the aspirants.

In due time the young men and maidens (a few) sent their drawings to THE ARCHITECT and he summoned the wise and trained minds of the great A. I. A. to view the some fearfully and some wonderfully made efforts to provide Mr. Clay Products with a domicile. After many hours of most serious consideration and debate and final harmonious agreement, they awarded THE ARCHITECT's fees in prescribed amounts and sequence to those who, in their trained judgment, were most worthy of Mr. Clay Products' money, expressing to certain others honorable mention for points of merit.

Clay Products viewed with great interest the many

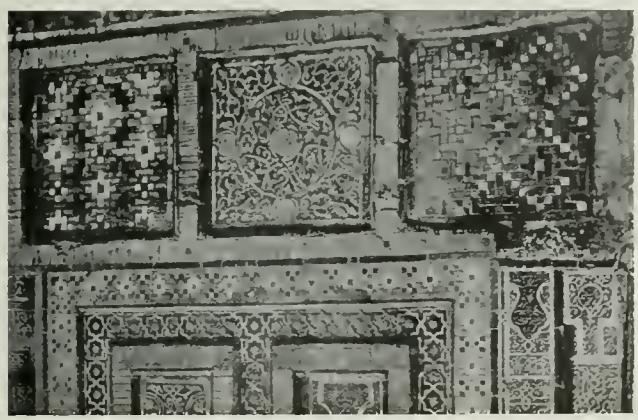
Cornice in Chapel, Vercelli.
The repeating form of the cornice panel makes an interesting and economical Terra Cotta motif Note interesting texture of Roof Tile

Doorway. St. Stefano, Bologna, Italy.
Reprint from The Architectural Record.
An inspiration for simple and interesting brick forms with an excellent suggestion for an inexpensive Terra Cotta trim



Entrance to Office of Frederick Sterner, New York.
A thoroughly interesting use of common brick. Terra Cotta inserts in plain or polychrome tones might be substituted for the old marble pieces

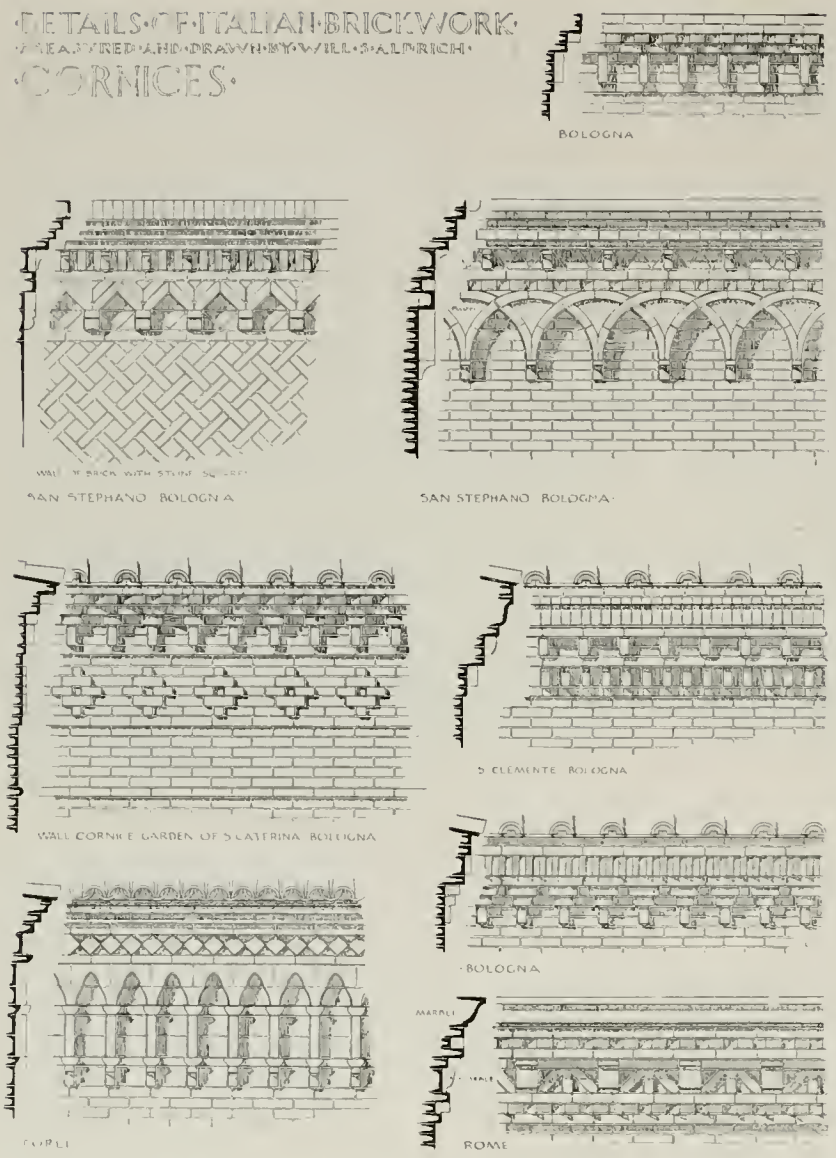
and various lights from which his requirements had been considered—a little disappointed, perhaps, that more contestants had not been interested in the problem, as he thought that he had not been niggardly in his fee to THE ARCHITECT. Viewed in the light of precedent, performance and possibility, he wondered a little that so few had seemed to attack the problem in Clay Products' terms, as possible and applied to California conditions; calling, as they do, for original thinking in a medium broad and plastic in color and form. Many of the designers seemed to be laboriously trying to please Clay Products by forcing his materials on an unoffending and unprotected architectural style, in some cases not only inappropriate to Clay Products, but to California as well. Many others, however, showed serious thought and effort and contained points of real interest.



Mansoleum, Samarkand, Persia.
Reproduced from The American Architect.
A few of the forms used in the many Persian examples. Many of the interesting examples are developed from the standard unit and capable of being used in inexpensive modern work.

The first award (Design No. 12) articulates a distinctly brick house, sane, and capable of considerable interest in brick tone and texture. A sand-finished or stock brick would be rather more appropriate than a rougher texture and much interest would be added by use of a Flemish bond. A rough cut flush joint would be effective. The broken roofs with their comparatively limited areas demand a small unit of tile, preferably of the Spanish type, fairly even in tone, although not selected to shade. Paving brick walks with quarry tile in porch and patio would be appropriate.

Design No. 8, carrying the second award, indicates great possibilities in brick where one has been wont to think white plaster in this type of architecture. Why not the Roman shape brick of as small units as possible (preferably 8x1½ inches), laid in wide, flush joints, thereby increasing the scale and value of the wall surfaces? Vision a light, warm gray, rough-textured brick, the wide, flush joints not too carefully pointed, forming a background for vines with blossoms of brilliant hues; or the cooler tones of so-called old gold shades laid in gray mortar. The terra cotta entrance properly detailed in light Caen stone gray color, carefully modeled and close jointed, would ere-



Some Details of Italian Cornices.

Reproduced from The Brickbuilder.

Simple and interesting methods of using standard units for brick mouldings and cornices. Subject to added interest by use of Tile or Terra Cotta inserts

ate a most interesting note in the facade. The roof should be random laid in large Mission tile of "kiln run" red tone, varying from salmons to purples, properly textured, and would create one of the chief charms of a very interesting composition. Loggia and patio laid in "Padre" hand-molded red tile, carefully related as to the size of the units (perhaps 6x6 inches would be in scale, for the former with a twelve-inch tile in the loggia), would lend an interesting foreground and note to the charmingly planned garden beyond.

The third award, Design No. 31, is altogether a most excellent solution, answering so many of the demands of a low cost house—altogether reasonable, without thrill or disturbing influence, but capable of warmth and interest within and without. If near a real clay bank, common brick would vibrate if laid in "Flemish bond." The amusing brick designing on gable end, recognizing great possibility in the material, will add a naive charm. Suggested formal patterning in the second story will add a texture that readily lightens the mass, and thoughtfully treated will illustrate the charm of play of color and texture in a plain brick wall. The entrance motif, pilasters of delicate refinement on a matrix of tile of various tones, forms a most intelligent foil to the plain brick walls and could be treated in tawny or old gold tones, with the pilasters even a trifle lighter. Old ivory terra cotta of matte enamel finish would harmonize well. The roof calls for a small Mission tile informally laid but not too rough, keeping hips and ridges flat and without emphasis.

Design No. 2, taking the fourth prize, is somewhat similar in general exterior lines to No. 31, and will draw its chief charm from careful choice of brick tones, texture and jointing—rug or ruffle brick, of scorched tones, in English or Dutch bond with rough, raked joints, would be effective. Large mission tile of varying brown flashed tones would apply if the rough brick were used.

The fifth award, to Design No. 19, is undoubtedly an acknowledgment by the jury of the fact that its author thought in brick and clay terms. While the building is a trifle small for the scale of the brick patterns, the reasoning is good and a most interesting result would build. The balcony feature, a combination of brick with inserted mouldings and panels in standard terra cotta would be delightfully picturesque. I think one would prefer to see this house in stock brick with the terra cotta mouldings sand finished, the modeling of panels sketchy, crisp, and left with marks of modeler's tools. The cornice indicates an inspiration from fourteenth century work in Southern Italy, where the workers seemed to build in such sympathy with their material and in so good a scale.

Design No. 4, taking sixth prize, is such a house as could be built in any nice, clean, well-governed town, be it of Connecticut, Colorado or California. The banker who grew up in his own town would build and enjoy living in it, because it is a thoroughly nice home. Of course, it should be built of smooth-faced front brick, either of light buff or red shade, joints three-sixteenths inch, smooth cut. The coved terra cotta frieze is in good scale and jointed with a consideration of the technicalities of the material. A clever conceit assists the intersecting joints of cornice. The roof should be of Spanish tile, even in tone.

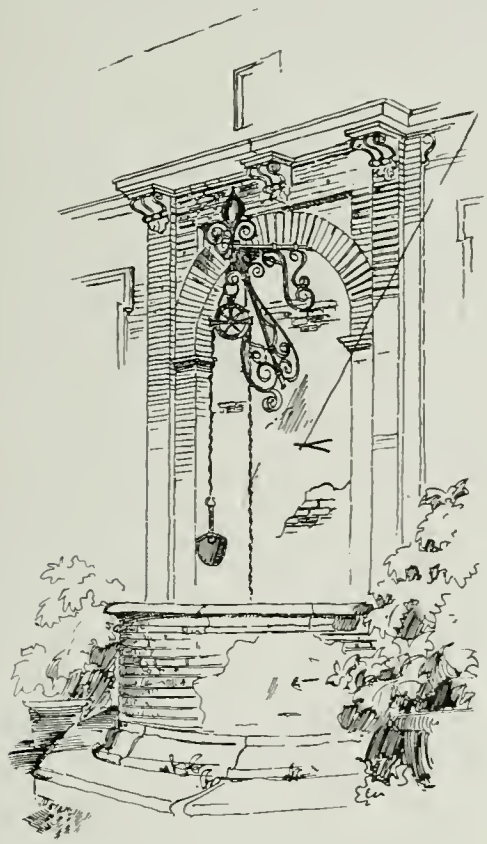
Many other designs had points of interest that one

would enjoy reviewing, but space does not permit. No. 14, a suggestion of the English country house type, recalls one of the most beautiful uses of brickwork in this country, the Bryn Mawr School in Baltimore, by Architect Henry Rutgers Marshall, of New York, one of the most cultured and refined minds in the profession. Old gold brick of Roman shape were used, selected to tone in planes and slashed with quoins, laid flush with wall planes, but taking their form from subtle variations of tones—a most masterly control of the medium throughout and altogether satisfying in scale of masses and tones.

Design No. 3 indicates a very possible doorway of Spanish inspiration. The plastic medium that we have in architectural terra cotta gives the designer much freedom in the floridly ornamental features of Spanish and Mexican Colonial style.

The author of Design No. 9, while using the type that, through mental habit, we vision in white plaster, evidently saw possibility of adding interest through tonal values of bricks to his lovely and picturesque conception. The simple doorway, with free standing candelabra, would be a strong spot of contrasting form and color to the light-colored, rough-textured brick laid in wide, flush joints carelessly pointed. The large Mission tile of broad range of tones and very roughly laid, doubling the eaves course, and in random spots occasionally doubling other tile, using warped tile freely, thus creating texture, is demanded.

Detail of Modern Doorway.
Howard Shaw, Architect
Appropriately and economically designed Architectural Terra Cotta door trim for a brick house



Well, in a Courtyard, Siena.
Reproduced from The Brickbuilder
A most interesting suggestion for a simple brick entrance with Terra Cotta impost capitals, brackets and cornice.

As the client reviewed his reasonable requests, based on economical structural reasoning, allowing his mind to swiftly vision precedents and examples of the use of burned clay products from the earliest centuries to modern developed practice; as he thought of conditions in Italy, quite parallel with those that prevail in California, and recalled the spontaneous and natural use of these materials, he could but reason that the majority of the competitors for his house design had failed to consider this phase of the problem. And why, when the means of education are so readily at hand?

The Brickbuilder has for years given especial attention to the collecting and disseminating of illustration and text on the subject, its files ready of access in the offices of most architects and libraries. The bibliography of the art is extensive and its works readily obtainable. A study of the development of the art cannot but interest any student of architecture, as no other material offers so broad a medium for individual expression in form, texture and color.

Recall the interesting use of brick in the early Assyrian, Persian and Roman work, developing through the centuries, perhaps reaching the zenith of its interest in the great mosques, mausoleums and grave towers of Persia. From the influence of this Persian brick era we find most fascinating fourteenth

MUSEUM OF SCIENCE AND ART, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.
Cope & Stewardson, Frank Miles Day & Bro., Wilson Eyre Jr., Associate Architects
An example of the artistic and intelligent use of brick. The suggestions are quite applicable to very simple buildings as belts and friezes

and fifteenth century work in France. So subtle was their patterning that some of it has almost the effect of a misty veil over the matrix of their architectural form.

In the early fourteenth century the Greeks were freely using brick forms, both in patterns and in polychrome, and during this same century Italy was creating her masterpieces in clay, extending through all of the ramifications of the art; her wonderful Certosa at Pavia illustrating the use of clay products from the crudest structural building forms, through paving tile, floor mosaics, brick patterning and textures, the most beautiful example of architectural terra cotta, colored faience, all roofed with clay tile of fascinating form and texture. The late Georgian period in England was peculiarly typical in its very natural use of brick, because it was the local and available material, consequently economical. Designers of esthetic ability naturally concerned themselves to arrange this available material to create the most interesting effects possible.

Paralleling this development, we find architectural terra cotta developing from it, through necessity for larger structural elements and a medium for broader esthetic expression.

The covering for the roof went through similar development. From the crude clay slab to the harmonious and many-colored glazed tile, as used on the dome of the Madison Square Church, we find, in clay, the expression of the evolution of the trained mind in the art of building.

The simple problem which we have been considering would seem to naturally demand clay products. The material is essentially local and suitable to California conditions. Under the present inflated condition of prices of building materials, the products of clay are among the very few that have not increased in price save for an incidentally proportionate amount to cover a voluntary wage increase made by manufacturers to cover the increased cost of living of their employes.

Recognizing the soundness of the premises, the best trained and most thoughtful men in our architectural profession today, and for years past, are the very men who are working most freely and naturally in clay products.

WELL KNOWN ARCHITECT PASSES AWAY

Edward Thompson Root, well-known architect of Portland, died at his home at Palatine Hill recently.

Mr. Root was born in Providence, R. I., September 27, 1867. He was graduated from Brown University in 1889. He was also a graduate of the Boston Institute of Technology. With his family, he came to Oregon in 1907.

Competition for a Small House and Garage

(Continued from page 17)

manufacturers of clay products have made these prizes possible:

Alberhill Coal and Clay Company, Los Angeles.
Brick Builders' Bureau, San Francisco.
Brick Manufacturers' Association, San Francisco.
Fresno Brick and Tile Company, Fresno.
Gladding, McBean & Co., San Francisco.
Los Angeles Brick Company, Los Angeles.
Los Angeles Pressed Brick Company, Los Angeles.
N. Clark & Sons, San Francisco.
Pacific Sewer Pipe Company, Los Angeles.
Richmond Pressed Brick Works, Richmond, Cal.
Simons Brick Company, Los Angeles.
Standard Brick Company, Los Angeles.
Steiger Terra Cotta & Pottery Works, San Francisco.
The K. & K. Brick Company, Los Angeles.

The aim of this competition is to create a sustained interest in the building of artistic and practical brick houses of moderate cost, and to demonstrate that houses built of these materials cost little more than those built of wood. Competition approved by the San Francisco Sub-Committee of the American Institute of Architects.

Statistics of Capacity and Construction San Francisco Public Library

(Omitted from June issue)

The capacity of the stack room at present is 500,000 volumes, with an ultimate total of 959,000 when the wing is extended. The general reading room cases hold 25,000 volumes, reference room 15,000, periodical room 8,000, technical room 10,000. These figures are necessarily based on an approximate standard size. The music, newspaper, and juvenile rooms all have large capacities. In connection with music room is a separate room for instruments, and the newspaper room has an adjacent stack room with bound files for reference.

The building is equipped with a complete artificial exhaust and supply ventilating system, which, so far has been entirely satisfactory—a pleasant and unusual fact to record. The cost per cubic foot was slightly under forty-five cents. This includes fittings and decorations, and the total cost, $1,153,000.00, was about $400.00 under the appropriation—another pleasant and unusual incident, which received its due share of attention from the Library Trustees. The construction consists, briefly, of steel frame (amounting to about 1,700 tons), with concrete floors and fireproofing, faced with California Granite.

IL CASTELLO, PIEDMONT.

THE ARCHITECT

VOL. XIV. SAN FRANCISCO, JULY, 1917 NO. 1

PALAZZO MADAMA, TURIN.

Editorial.

THE subject of architectural competitions in general is a difficult one. There is much to be said for and against; there is always much said after the prizes have been awarded. But as to the value of a students' competition, there is no question.

As a process for mental development, it is probably even more valuable to the losers than to the winners. The knowledge of what to avoid is one of the greatest factors in any success. It is not always easy, however, for an inexperienced man to follow the reasoning of a jury and see just the mistakes that cost him a place.

It is obviously the duty of a jury, therefore, to explain clearly not only the good points of the prize winners, but the errors of other competitors. In connection with the "Competition for a Small Brick House and Garage," which has been running under THE ARCHITECT's patronage for some months, and to which this issue is largely devoted, it is a pleasure to note the articles by members of the jury which accompany the formal decision of awards.

Any competitor who is intelligent and sincere will profit by a careful reading and study of these articles. The next competition of similar character should show a radical improvement in conception of the problem, observation of the program, and truthfulness of presentation.

There were some charming designs which were neither given a place nor chosen for publication. A general criticism of these unsuccessful ones would be based partly upon the weakness of plan, and partly on the inappropriateness of style. Minor breaches of the program were so common that in some cases they were overlooked. This was unfortunate; but was held to be necessary to get best results. But the essential requirements were carefully adhered to in judging designs, and disregard of any of these kept otherwise promising plans from securing a place.

On the whole, THE ARCHITECT feels that the results of the competition were decidedly encouraging and worth the time and money involved, and congratulates both prize winners and jury.

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Official News of Pacific Coast Chapters, A. I. A.

The Architect is the Official Organ of the San Francisco Chapter, Southern California Chapter and Washington State Chapter, A. I. A.

The regular minutes of meetings of all Pacific Coast Chapters of the American Institute of Architects are published on this page each month.

San Francisco Chapter, 1881—President, Edgar A. Mathews, 251 Post Street, San Francisco, Cal. Secretary, Morris M. Bruce, Flood Building, San Francisco, Cal. Chairman of Committee on Public Information, William B. Faville, Balboa Building, San Francisco. Chairman of Committee on Competition, William Mooser, Nevada Bank Building, San Francisco. Date of Meetings, third Thursday of every month; Annual, October.

Southern California Chapter, 1894—President, J. E. Allison, 1405 Hibernian Building, Los Angeles, Cal. Secretary, A. R. Walker, 1402 Hibernian Building, Los Angeles, Cal. Chairman of Committee on Information, W. C. Pennell, Wright & Callender Building, Los Angeles. Date of Meetings, second Tuesday; except July and August at Los Angeles.

Oregon Chapter, 1911—President, Joseph Jacobberger, Board of Trade Building, Portland, Ore. Secretary, W. C. Knighton, 307-309 Tilford Building, Portland, Ore. Chairman of Committee on Public Information, Joseph Jacobberber. Date of Meetings, third Thursday of every month at Portland; Annual, October.

Washington State Chapter, 1894—President, Charles H. Bebb, Seattle. First Vice-President, Daniel R. Huntington, Seattle. Second Vice-President, George Gove, Tacoma. Third Vice-President, L. L. Rand, Spokane. Secretary, J. C. Coté, Seattle. Treasurer, Ellsworth P. Storey, Seattle. Counsels: J. H. Schack, J. Stephen and Charles H. Alden. Date of Meetings, first Wednesday, except July, August and September, at Seattle, except one in spring at Tacoma. Annual, November.

The American Institute of Architects—The Octagon, Washington, D. C. Officers for 1917: President, John Lawrence Mauran, St. Louis, Mo.; First Vice-President, C. Grant La Farge, New York City, N. Y.; Second Vice-President, W. R. B. Willcox, 400 Boston Block, Seattle, Wash.; Secretary, Burt L. Fenner, New York City, N. Y.; Treasurer, D. Everett Waid, 1 Madison Ave., New York City, N. Y.

Board of Directors for One Year—Charles A. Coolidge, 122 Ames Building, Boston, Mass.; Charles A. Favrot, 505 Perrin Building, New Orleans, La.; Elmer C. Jensen, 1401 New York Life Building, Chicago, Ill. *For Two Years*—Edwin H. Brown, 716 Fourth Avenue, Minneapolis, Minn.; Ben J. Lubschez, Reliance Building, Kansas City, Mo.; Horace Wells Sellers, 1301 Stephen Girard Building, Philadelphia, Pa. *For Three Years*—William B. Faville, Balboa Building, San Francisco, Cal.; Burt L. Fenner, New York City; Thomas R. Kimball, Omaha, Neb.

Minutes of Washington State Chapter

The regular monthly meeting of the Washington State Chapter, American Institute of Architects, was held at Woman's Exchange, 209 Union Street, Seattle, June 6, 1917, at 6 p. m.

Those present were: Messrs. Bebb, Baeder, Alden, Field, Parks, Coté, Huntington, Richardson, Loveless, Schack, Willcox, Willatzen, Svarz, Zeigler.

President Bebb in the chair.

The President opened the meeting with appropriate remarks concerning the professional services that the Chapter may render the Government in the present emergency, concluding by offering the following resolution: "Be it resolved, That it is the sense of this meeting that we applaud and indorse the high spirit of patriotism that has lead our fellow member and Secretary to enlist for active service in the United States Engineers Corps, Colonel Cavanaugh. We know that he bears with him the essentials of high intelligence and a trained mind. He takes also with him the highest regards of his fellow members in the Chapter and their earnest wishes for his well being and the full knowledge that duties assigned to him will be adequately filled, and his advance more assured. We wish him God speed." Resolution unanimously adopted.

MINUTES

The minutes of the last meeting were read and approved.

COMMITTEE REPORTS

Civic Design—Alden, chairman, reported on the matter of building zones, and gave a resumé of the work already accomplished along these lines, especially in the cities of New York and Minneapolis. This was followed by remarks on the subject by Messrs Willcox and Huntington. By motion of Loveless, the committee was instructed to continue the work and to ask for the co-operation of the Real Estate Association of Seattle Motion carried.

Exhibition—Field, chairman, reported that the Chapter's Traveling Exhibit was still on its tour and that a request had been made for it from Eugene, Oregon, but because of previous arrangements he had not been able to comply with the request. The exhibit was to be sent to the eastern part of the State in the near future. Mr Field suggested that a legend reviewing the competition and adoption of the group plan for the capitol buildings at Olympia, Washington, be prepared for use in connection with the illustrations recently received from Messrs. Wilder & White, to be added to the Traveling Exhibit Motion by Willcox to instruct the Exhibition Committee to prepare such a legend and submit same to the Council for approval Motion carried.

Ordinances—Schack reported in the absence of Stephen, chairman, that as the committee had not received a copy of the proposed revision to the plumbing ordinance in due time to make an intelligent review prior to the date set by the City Council to consider same, June 6th, the committee had requested the Council for a postponement, which request had been granted

Constitution and By-Laws—Coté, chairman, reported that copies of the views of the Chapter as recorded at the last regular monthly meeting, concerning the proposed standard form of Constitution and By-Laws for the Chapters had been sent to Mr. Frederick W. Perkins and to the *Octagon* in the early part of May.

Institute Affairs—Willcox, chairman, reported that at the meeting of the Board of Directors at the Institute, held at Atlanta, Georgia, on May 17th, it had been decided to postpone final consideration of the Chapters' Constitution and By-Laws until the September meeting. Mr. Willcox also reported on matters pertaining to the *Octagon*, and concluded with remarks concerning the matter of fellowship in the Institute.

Conferences—Stephen, chairman; report by Coté on the second annual banquet of the architects and the members of the Association of Master Builders of Seattle, held during the month of May, and made remarks concerning the excellent papers read on the occasion.

CORRESPONDENCE

Communication from the Metropolitan Building Co., of Seattle, acknowledging receipt of letter of commendation from the Chapter, in appreciation of the suitable design for the oil station that the company had recently caused to be erected opposite the Metropolitan Theater.

Letter from Messrs Wilder & White concerning the sending out of illustrative material for the Chapter's Traveling Exhibit.

NEW MEMBERS

The Secretary was instructed to send out a letter ballot to the Institute members of the Chapter in connection with Mr. James E. Blackwell's application for membership in the Institute.

NEW BUSINESS

Motion by Willatzen that a special committee be appointed to confer with a committee of the Municipal League in response to their request, the object being matters pertaining to new school buildings. Motion carried

Huntington reported that the City Engineer's office was preparing a plan for the rebuilding of the town of Cedar Falls, Washington, which town site, being in the watershed from which the city of Seattle draws its water supply, is controlled by the city, and recommended that the Chapter take an interest in the development of this plan.

Motion by Willcox that the Committee on Civic Design take the matter up with the City Engineer's office. Motion carried.

Messrs. Willcox and Huntington were appointed to serve on the Committee on Civic Design, in place of Mr. Webster, who had been seriously ill for some time, and Sexsmith, who had joined the Ambulance Corps for service in France.

Motion by Willcox that the Chapter arrange for a farewell luncheon on Monday noon, June 11th, to the members and draftsmen who had recently entered the United States service Motion carried.

The President informed the Chapter that the Council had appointed Mr. G C. Field acting Secretary for the balance of the year, to replace the present Secretary, who had joined the Eighth Regiment, United States Engineers Corps, for immediate service.

Meeting adjourned

J S. Coté, *Secretary.*

Approved..... .....1917.

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ARCHITECTS' REFERENCE INDEX

Containing List of Manufacturers, Their Representatives and Serviceable Literature

ASBESTOS BUILDING LUMBER
- **Keasbey & Mattison Co.**, Ambler, Pa.
- **J. A. Drummond**, 245 Mission Street, San Francisco, Cal.
  - Illustrated and descriptive pamphlet, 7¾x10¾, 8 pp. Pamphlet, 4x8½, 8 pp. Price list, 3½x6¼. Literature of various sizes, samples, etc. "Service Sheets," working drawings, details of application, size 16½x21½.

ASBESTOS CORRUGATED SHEATHING
- **Keasbey & Mattison Co.**, Ambler, Pa.
- **J. A. Drummond**, 245 Mission Street, San Francisco, Cal.
  - Descriptive catalogue, 5½x8¼, 24 pp. Catalogue of details and specifications for application of roofing and siding, size 8½x11, 40 pp. Lists of buildings covered. Price lists, 3½x6¼, 6 pp., and literature of various sizes, samples, etc. "Service Sheets," working drawings, details of application, size 16½x21½.

ASBESTOS SHINGLES
- **Keasbey & Mattison Co.**, Ambler, Pa.
- **J. A. Drummond**, 245 Mission Street, San Francisco, Cal.
  - Illustrated catalogue. Detail specifications, 8x10, 20 pp. Descriptive catalogue, various types of roof covering, 5½x8¼. Various pamphlets, 3¾x6. Current price lists, 3½x6¼, 6 pp. Lists of buildings and literature, various sizes, samples, etc. "Service Sheets," working drawings. Detail of application, size 16½x21½.

BRICK, ENAMELED
- **N. Clark & Sons**, 116 Natoma Street, San Francisco, Cal.
  - Catalogue and various literature.
- **Los Angeles Pressed Brick Co.**, Frost Bldg., Los Angeles, Cal.
- **United Materials Co.**, 5 Crossley Bldg., San Francisco, Cal.
  - Catalogue on "Enameled Brick for Facing," illustrating and listing names of prominent buildings finished with Enameled Brick 5x7½. 48 pp.
- **Steiger Terra Cotta and Pottery Works**, 729 Mills Bldg., San Francisco, Cal.
  - Catalogues and various literature.
- **Washington Brick, Lime & Sewer Pipe Co.**, Spokane, Wash.
  - Catalogues and various literature.

BRICK, FIRE AND REFRACTORIES
- **N. Clark & Sons**, 116 Natoma Street, San Francisco, Cal.
- **Henry Cowell Lime & Cement Co.**, 2 Market Street, San Francisco, Cal.
  - Imported and domestic brands.
  - Catalogues and various literature.
- **Los Angeles Pressed Brick Co.**, Frost Bldg., Los Angeles, Cal.
- **United Materials Co.**, 5 Crossley Bldg., San Francisco, Cal.
  - Descriptive catalogue, 5x7, 54 pp.
- **Steiger Terra Cotta and Pottery Works**, 729 Mills Bldg., San Francisco, Cal.
  - Catalogues and various literature.
- **Washington Brick, Lime & Sewer Pipe Co.**, Spokane, Wash.
  - Catalogues and various literature.

BRICK, PRESSED
- **N. Clark & Sons**, 116 Natoma Street, San Francisco, Cal.
  - Catalogues and various literature.
- **Los Angeles Pressed Brick Co.**, Frost Bldg., Los Angeles, Cal.
- **United Materials Co.**, 5 Crossley Bldg., San Francisco, Cal.
  - Moulded and Ornamental Pressed Brick. General catalogue 5x7, 54 pp.
- **Steiger Terra Cotta and Pottery Works**, 729 Mills Bldg., San Francisco, Cal.
  - Catalogues and various literature.
- **Washington Brick, Lime & Sewer Pipe Co.**, Spokane, Wash.
  - Catalogues and various literature.

CEMENT, PORTLAND
- **Atlas Portland Cement Company, The**, 30 Broad St., New York.
  - (Western Representatives see advertisement.)
  - Building a Bungalow. Addressed to owners. Booklet 8x10½ 14 pp. with 4 insert plates.
  - Choosing the Garage. Describing actual construction. Booklet, 8x10½ in. 26 pp.
  - Commercial Garages. With construction notes and architectural treatment. Booklet 8x10½ in. 12 pp.
  - Early Stucco Houses. With modern stucco specifications. Booklet. 8½x11 in. 24 pp.
  - Guide to Good Stucco. Addressed to contractors. Booklet. 8½x11. 20 pp.
  - Handbook and Treatise. Concrete in factory construction. 6½x8¾ in. 250 pp.
  - Information for Home Builders. Addressed to owners. Booklet. 8½x10¾. With 8 insert plates.
- **Henry Cowell Lime & Cement Co.**, 2 Market Street, San Francisco.
- **Cowell Portland Cement Co.**, Cowell, Cal.
  - Mt. Diablo Brand especially for cementing oil wells. Literature and pamphlet supplies on request as furnished by the Portland Cement Association.
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- **Keasbey & Mattison Co.**, Ambler, Pa.
- **J. A. Drummond**, 245 Mission Street, San Francisco, Cal.
  - Descriptive Pamphlet, 3½x6. 12 pp. Descriptive, 4x8½, 8 pp. "Service Sheets" working drawings. Detail of application, 16½x21½.

ELEVATORS
- **Otis Elevator Co.**, Eleventh Avenue and 26th Street, New York.
- **Otis Elevator Co.**, 2300 Stockton Street, San Francisco, Cal. Offices in all principal Coast cities.
  - Otis Electric Traction Elevators. Bulletin, 6x9 in. 28 pp.

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- **Otis Elevator Co.**, Eleventh Avenue and 26th Street, New York.
- **Otis Elevator Co.**, 2300 Stockton Street, San Francisco, Cal. Offices in all principal Coast cities.
  - Otis Escalators. Bulletin, 6x9 in. 36 pp.

GARDEN POTTERY AND FURNITURE
- **Sarsi Studios**, 361 Golden Gate Avenue, San Francisco, Cal.
  - Pamphlet. Pompeiian Stone. Size 6x9 in. 4 pp.

GLASS
- **W. P. Fuller & Co.** Principal Coast cities.
  - Plate, Sheet and Mirror Lists.
  - Glass Samples.
- **Keasbey & Mattison Co.**, Ambler, Pa.
- **J. A. Drummond**, 245 Mission Street, San Francisco, Cal. Pacific Coast representative CORRUGATED WIRE GLASS for skylight construction (without housings), used in connection with Asbestos Corrugated Sheathing. Catalogue of details. 8½x11. 40 pp.

IRONING BOARDS
- **National Mill & Lumber Co.**, 318 Market Street, San Francisco, Cal.
  - Pamphlet. 3½x6⅝ in. 4 pp.

LANDSCAPE ENGINEERS
- **MacForie-McLaren Co.**, 141 Powell Street, San Francisco, Cal.
  - Descriptive catalogue. 5x8¾. 52 pp.

LATH, METAL
- **North Western Expanded Metal Co.**, 934 Old Colony Building, Chicago, Ill.
  - Designing Data. Scientific treatise on reinforced concrete. 4x6½ in. 88 pp.
  - Kno-Burn Expanded Metal Lath. Treatise on metal lath, with details and specifications. 6x9 in. 52 pp.
  - "Chanelath" Handbook. Treatise on ribbed metal lath details and specifications of its application to reinforced concrete construction and for plastering work. 6x9 in. 48 pp.
  - Stucco Specifications. Reprint of the standard specifications adopted by the American Concrete Institute.

LIME
- **Henry Cowell Lime and Cement Co.**, 2 Market Street, San Francisco, Cal.
  - Santa Cruz and Cowell Santa Cruz Brands.
- **Washington Brick, Lime & Sewer Pipe Co.**, Spokane, Wash.
  - Catalogues and various literature.

MANTEL BRICK
- **N. Clark & Sons**, 116 Natoma Street, San Francisco, Cal.
  - Catalogues and various literature.
- **Los Angeles Pressed Brick Co.**, Frost Building, Los Angeles, Cal.
- **United Materials Co.**, 5 Crossley Bldg., San Francisco, Cal.
  - Illustrative of designs for mantel. 5x6 in. 54 pp.
- **Steiger Terra Cotta and Pottery Works**, 729 Mills Building, San Francisco, Cal.
  - Catalogues and various literature.

MANTELS, STONE
- **Sarsi Studios**, 361 Golden Gate Avenue, San Francisco, Cal.
  - Pamphlet on Art Cast Stone. 6x9 in. 4 pp.

MILL WORK
- **National Mill & Lumber Co.**, 318 Market Street, San Francisco, Cal.
  - Catalogue of Moulding Columns, Doors and General Mill Work. 7x10. 94 pp.

PAINTS, ENAMELS AND WOOD FINISHES
- **Berry Bros.**, Wight and Leibe Streets, Detroit, Mich.
- **Berry Bros.**, 250 First Street, San Francisco, Cal.
  - Natural Woods and How to Finish Them. Complete varnish specifications. 4¾x6½ in. 94 pp.
  - Luxeberry Cement Coating. Color card. 3¼x8⅞ in. 3 pp.
- **Boston Varnish Co.**, Everett Station, Boston.
- **San Francisco Office, A. L. Greene, Mgr.**, 311 California Street.
  - Kyanize Enamel. Complete, specifications. Booklet. 5x7 in. 20 pp.
  - Kyanize White Enamel. Directions. Circular. 3½x6 in. 8 pp.
  - Price List of Varnishes and Enamels. 3½x6 in. 24 pp.
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  - Catalogues, literature and color cards.
- **Wadsworth, Howland & Co., Inc.**, 119 Federal Street, Boston.
- **San Francisco Office, James Hambly & Sons**, 268 Market Street, San Francisco, Cal.
- **Los Angeles Office**, 447-449 E. Third Street, Los Angeles, Cal.
  - Bay State Brick and Cement Coating. Catalogue. 4x9. 24 pp. Color plates.
  - Bay State Finishes, Stains, and Varnishes. Pamphlets. Color cards, etc.

PIPE, WOOD
- **Pacific Tank & Pipe Co.**, 318 Market Street, San Francisco, Cal.
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- **Nephi Plaster & Mfg. Co.**, 711 Boston Bldg., Salt Lake City, Utah.
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Current Notes and Comments

The Washington State Chapter of the American Institute of Architects held a luncheon on Monday noon, June 11th, at the University Club, Boren Avenue and Madison Street, in honor of Chapter members and draftsmen who are leaving to serve their country. Charles H. Bebb, president of the Chapter, presided.

The following men have left or are about to leave: J. S. Coté, secretary of the Chapter, has joined Colonel Cavanaugh's regiment and left June 12th for American Lake. W. Marbury Somervell has received a commission in the navy and left June 9th for Washington. H. O. Sexsmith, assistant professor of architecture at the University of Washington, has been appointed first sergeant in the American Ambulance Company No. 12, University of Washington unit. Of the draftsmen, Philip French is second lieutenant in the Washington Coast Artillery. Clarence George is a private in the same regiment. George Haugen and B. F. Cole have joined the aviation division of the Signal Corps at San Diego. Clair Kinney is at the Presidio with the officers of the Reserve Corps. Arthur Anderson has joined Colonel Cavanaugh's engineer regiment. Burton Carr is in the Officers' Reserve Corps. Frederick A. Hansen is going into the navy. Charles Williams is in the radio service at the Puget Sound Navy Yard. Herman Lindhanst, Coast Artillery; Linn J. Bain, Outpost Company of the Signal Corps; Frederick W. Elwell, naval reserve officer; Walter Bogart, Signal Corps.

The Atlas Portland Cement Co., of New York City, have recently issued three new booklets as follows:

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Berry Bros., Detroit, Michigan, have for some time issued a relative standing of their numerous salesmen during each month.

Mr. T. H. Gehrken, of the San Francisco Branch Office, has the distinction of being the star salesman for April of this year. Mr. C. H. Adams, of the same office, is second for the month. These two men are always well up in the list, which shows results of the energy put forth in backing up their advertising campaigns conducted in the Pacific Coast territory.

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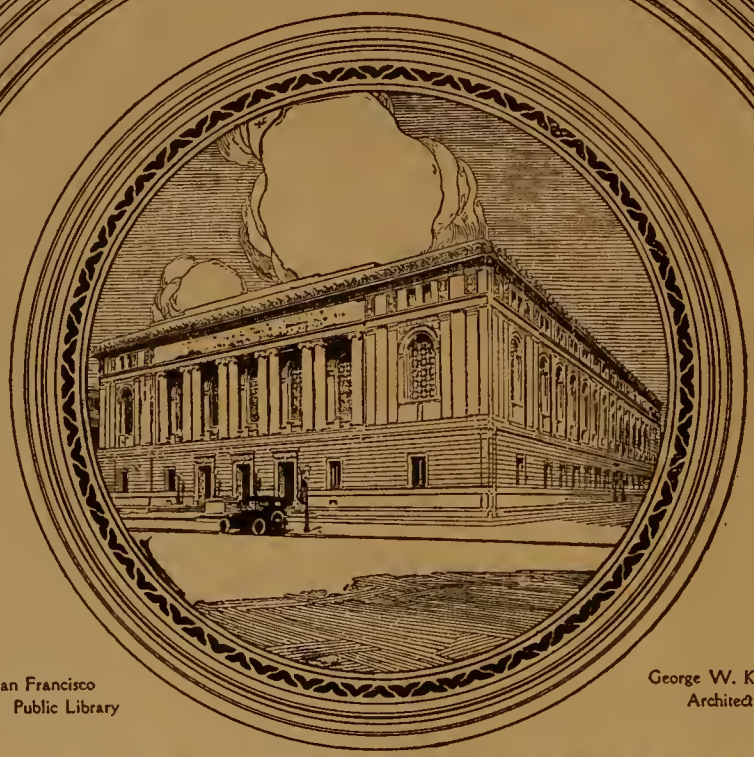

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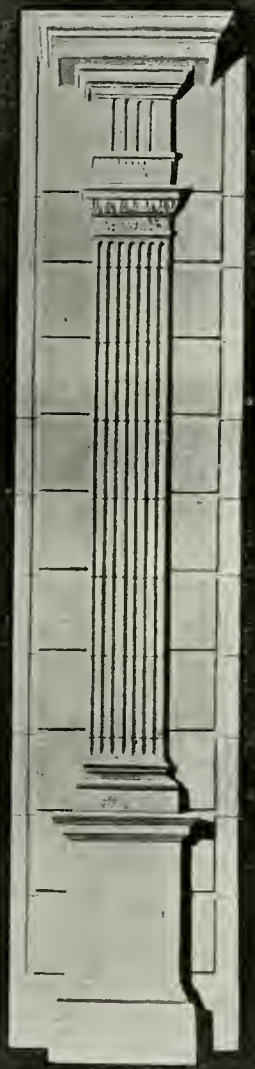

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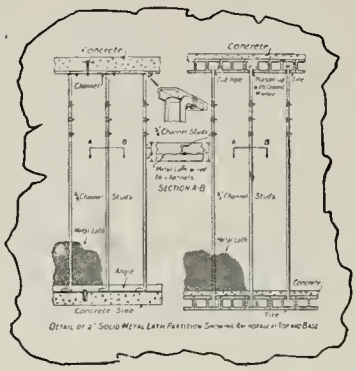

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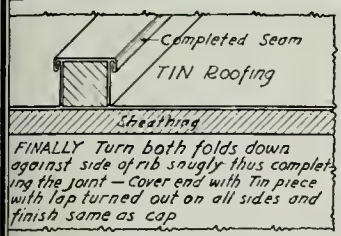
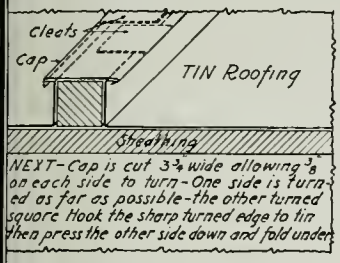
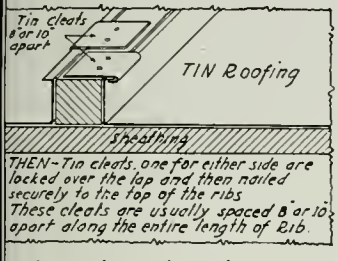


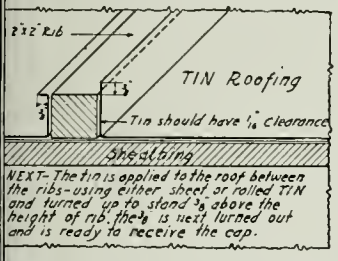
FINALLY Turn both folds down against side of rib snugly thus completing the joint — Cover end with Tin piece with lap turned out on all sides and finish same as cap



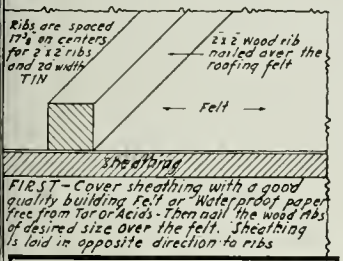
NEXT - Cap is cut 3⅜ wide allowing ⅜ on each side to turn - One side is turned as far as possible - the other turned square Hook the sharp turned edge to tin then press the other side down and fold under



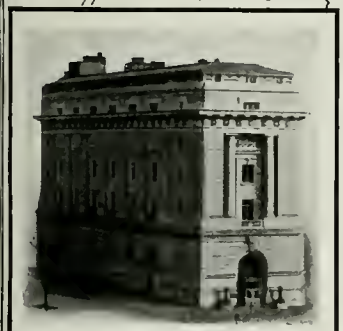
THEN - Tin cleats, one for either side are locked over the lap and then nailed securely to the top of the ribs These cleats are usually spaced 8 or 10 apart along the entire length of Rib.



NEXT - The tin is applied to the roof between the ribs - using either sheet or rolled TIN and turned up to stand ⅝ above the height of rib, the ⅛ is next turned out and is ready to receive the cap.

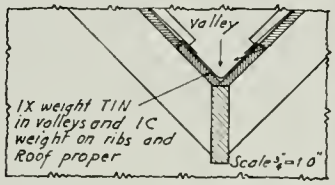


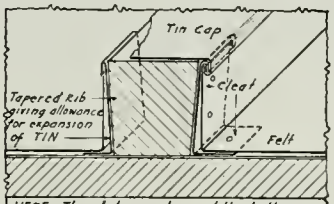
FIRST - Cover sheathing with a good quality building felt or "Waterproof paper free from Tar or Acids - Then nail the wood ribs of desired size over the felt. Sheathing is laid in opposite direction to ribs



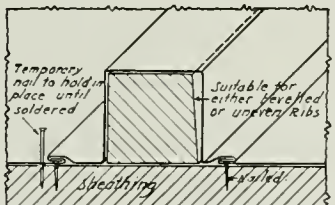
6" Open Valley

SKETCH OF VALLEY WITH RIBBED ROOFING

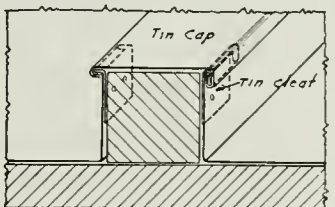




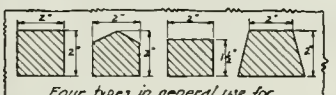
HERE - The rib tapers toward the bottom giving ample allowance for the expansion of the TIN. The cleats are fit snugly to the taper and are nailed to both the Rib and the sheathing.



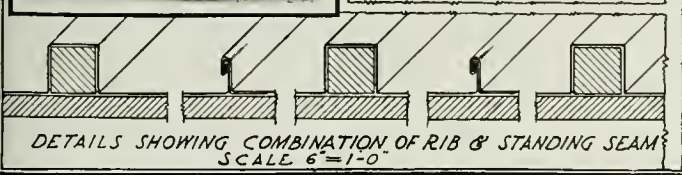
Method particularly adopted to BEVEL or IRREGULAR RIBS Here the cap is held on by regular Flat seams on each side of the RIB Scale 6" = 1'0"



Method where similar cap is used, the cleats being fastened to the sides of the Rib instead of the top Scale 6" = 1'0"



Four types in general use for WOOD RIBS to be covered with TIN SCALE 3" = 1'0"



DETAILS SHOWING COMBINATION OF RIB & STANDING SEAM SCALE 6" = 1'0"

OX TARGET-ARROW REGISTERED
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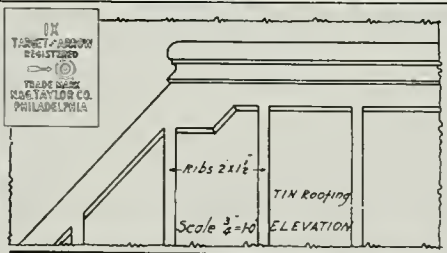
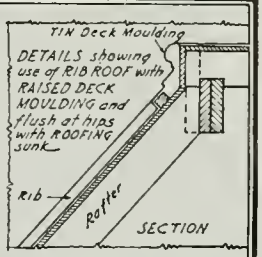
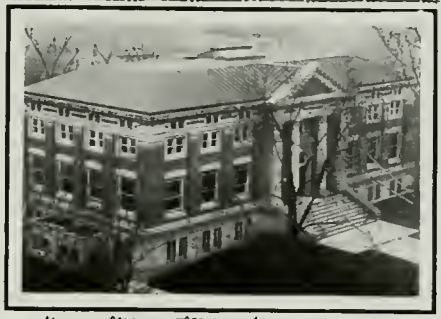
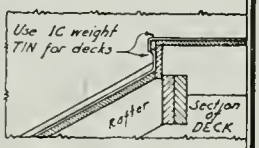
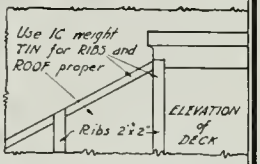
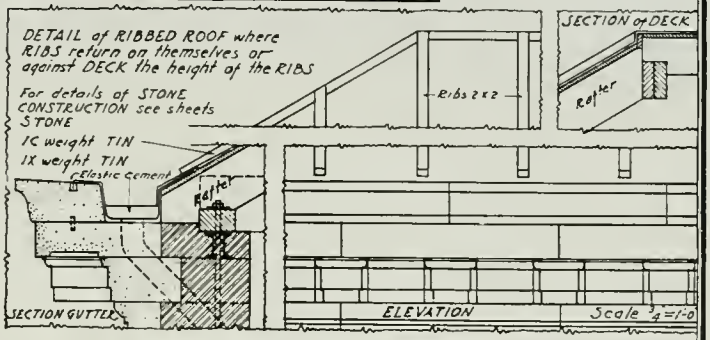


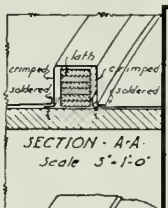

TIN Deck Moulding
DETAILS showing use of RIB ROOF with RAISED DECK MOULDING and flush at hips with ROOFING sunk
Rib
Rafter
SECTION

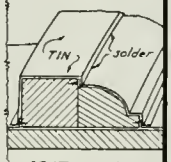




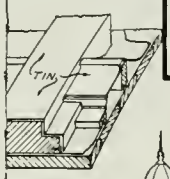






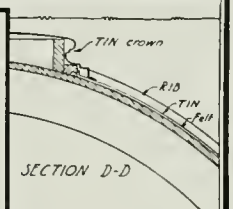


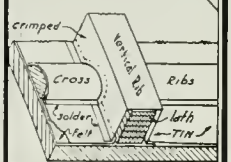
SECTION B-B



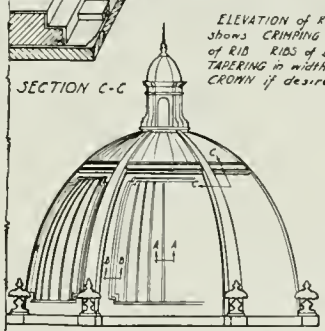
DOME covered with TIN, RIBBED

ELEVATION of RIB on the right shows CRIMPING of TIN on the sides of RIB RIBS of DOME may be made TAPERING in width from BASE to CROWN if desired



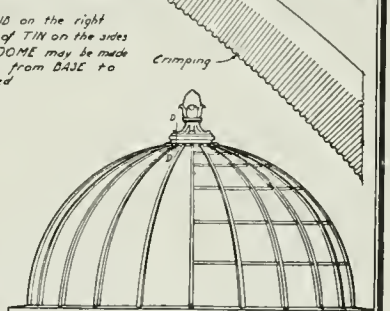


Sketch showing TIN JOINTS on horizontal RIB and intersection of both RIBS



ELEVATION of DOME shown above

Showing adaptability of TIN RIBBED ROOFING to ornamental Designs



ELEVATION of RIBBED DOME

One half showing VERTICAL RIBS - One half showing VERTICAL and HORIZONTAL RIBS

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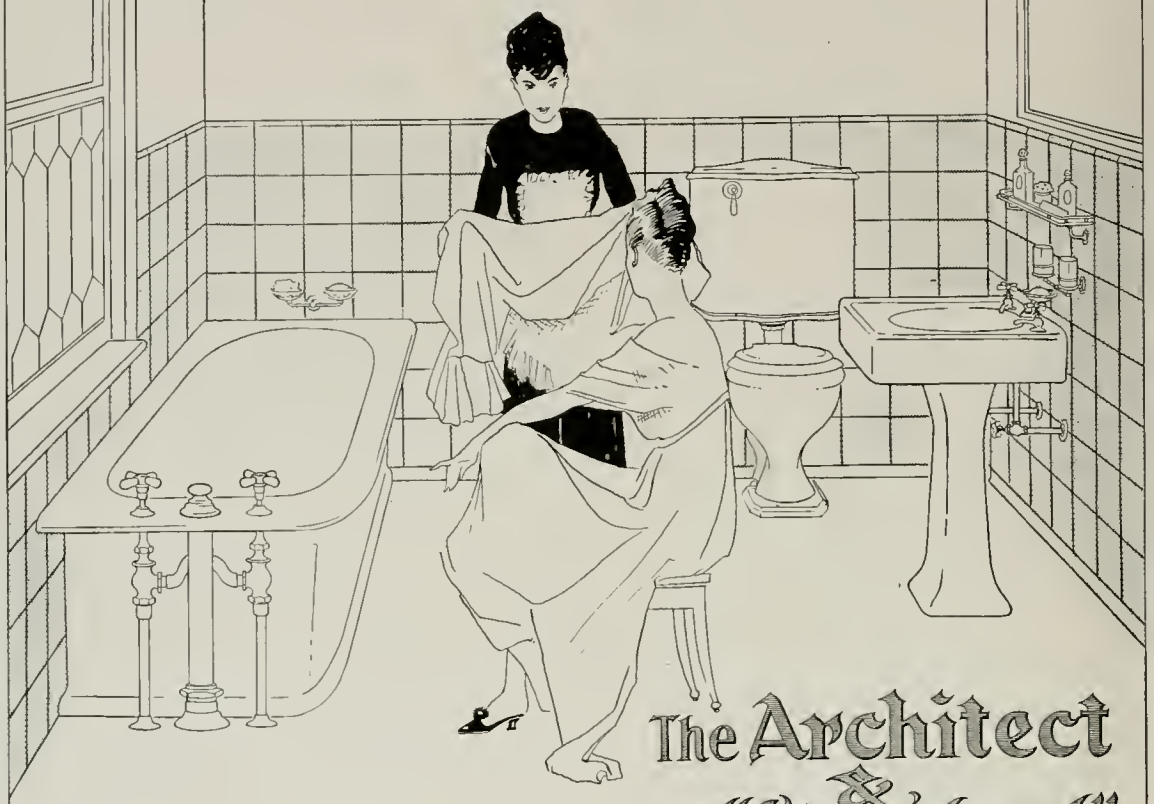

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Vol. XIV. No. 2

THE ARCHITECT

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Associate Editors for August, 1917
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ARTHUR BROWN - San Francisco
WILLIAM O. ROIGUEL - San Francisco

HARRIS ALLEN
EDITOR

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¶ Published in the interest of the architectural profession, on the first of each month, at 245 Mission Street, San Francisco. Entered as second class matter August 4, 1911. Subscription price in the United States and possessions, $5.00 a year; foreign and Canadian, $6.00 a year. Single copies, 75 cents each.

¶ Changes in, or copy for new advertisements, must reach the office of publication not later than the fifteenth of the month preceding issue. Advertising rates and any other information will gladly be given on application.

¶ The editor will be pleased to consider contributions of interest to the profession. When payment for same is desired, this fact should be stated. E. D. McDonald, Northwest Representative, 4100 Arcade Building Seattle, Washington.

THE SATHER TOWER, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

THE ARCHITECT

VOL. XIV SAN FRANCISCO, AUGUST, 1917 NO. 2

THE OAKS AND FOOTBALL STATUE, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

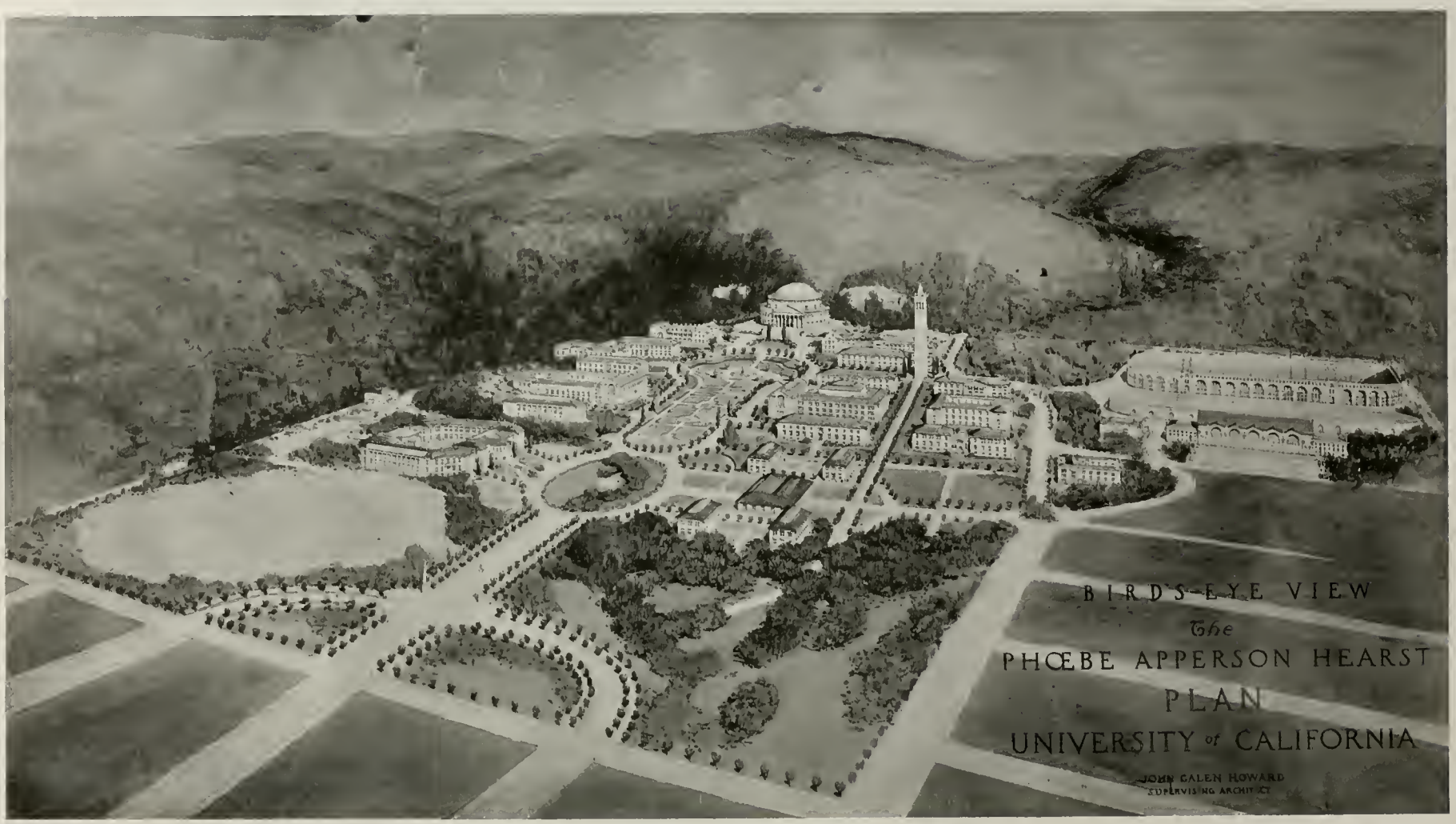
The University of California

By GEORGE W. KELHAM

FOR many years I have entertained—and not alone—a healthy and full-grown dislike of written architectural criticism—as mostly practiced. Mere personal likes and dislikes govern much of it, and rarely do we base our views on logical analysis of the designer's problems.

We are perhaps of all the world a nation of critics, going gaily forth primed with ammunition from the daily paper, prepared to advise about any particular job that somebody else is doing. While all this may at times have its benefits, it most certainly has not improved the popular viewpoint as regards the solution of serious problems in the world of art.

When I consented to write something anent the architectural development of the University of California, I confess the idea did not seem too difficult. I had heard many people—architects and others—express their views of the university work—probably I have expressed mine—and only when I tried to put these views in some intelligent form that would treat



BIRDS-EYE VIEW OF COMPLETED CAMPUS, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

PLAN OF COMPLETED CAMPUS, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

the subject fairly did I realize how little I really knew of it and how large a problem was involved.

In a word, I was setting forth in the good old-fashioned way to either praise or blame something I did not even understand.

Since then I have been "going to school" over at Berkeley and I hope—even believe—that I know some small part of the requirements and conditions that have entered into the creation of this work.

Most of us in the profession are familiar with the original competitive plan for the university and with its evolution into the present reality under the guidance of Mr. Howard; but how many knew enough of the road he has traveled, of the difficulties overcome, to judge his success or failure? I confess I did not.

A comparison of the Bénard plan with that now being worked out is an interesting, even a fascinating study. The growth of the plan, its different groups falling into place in accord with the requirements of each and the possibilities of the terrain show two things clearly: First, that Mr. Howard has kept in mind all the good points possible in the original, and second, that the great departures he has made follow lines of unanswerable logic and necessity.

For most of us the greatest interest in the university growth, speaking architecturally, lies in its general plan; and here, in order to properly enter into and grasp the present and future scheme, we must perhaps change the idea of a university which many of us have held. To say that Oxford, Harvard, Princeton, Columbia, each with its peculiar atmosphere and charm, represent that idea, broadly speaking, would not be wide of the mark; but here at Berkeley we enter upon conditions so different that we must completely revamp our point of view. And why? Because we have a university built to express it in the simplest terms, on the "side of a hill," and also we have a site differing from all others in its great irregularity and *fixed* conditions of natural beauty; as perfect a setting, however, for a group of monumental buildings as could be imagined. That almost reverent care for the preservation of these natural beauties has been shown in the planning of the university will lay the people of California under a lasting debt to its architect.

It is with these conditions that we find Mr. Howard at his best and realize the splendid thought that has been put into this work. Starting out where Bénard dropped it, he has transformed and condensed what was a limitless ideal into a practical working plan, meeting at each step the requirements of the individual buildings (so different from the competition program as to be unrecognizable), and while each building has naturally taken a form of its own, he has through it all kept clearly in mind the final goal—the ensemble.

So that, while the plan is a natural growth unhampered by the *original* conception, there is no element which has ever escaped the overlying influence of this main idea; and it is the ability to "hew to the line," a thing none too easy in these days of rapid changes and differing opinions, that will bring forth, unless present signs fail, a final scheme of great beauty and practical working value. I cannot recall ever having

THE SATHER GATE, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

THE HUMANITIES GROUP

THE UNIVERSITY LIBRARY, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

seen a large, comprehensive plan in which the "paper" impression received was so completely changed when on the ground itself.

Looking at the block plan, one finds some things which are not at once understood; there is perhaps no convincing reason apparent, but the site furnishes the answer in each case and with perfect clearness.

As an example, one would naturally ask, Why interrupt the main avenue leading to the large Auditorium with the elliptical plaza shown near the entrance? It is a great vista and the inclination would surely be to take full advantage of it. Yet even a cursory study of the existing conditions — the great groups of trees, the stream winding through — show how impossible it would have been to do away with this treatment without great loss of beauty; and, further, one realizes that the effect of coming upon the main avenue, with its gardens and groups of buildings, is enormously enhanced by first passing through this informal and intimate spot.

I cite this instance merely because it seems to me typical of all those things in the development of this great scheme, which have been changed and restudied time and again to finally emerge a sort of "survival of the fittest" in their ability to meet the acid test of the imposed conditions, and because I want to again emphasize as strongly as I can the influence which these imposed natural conditions have exercised, and rightly, in the decisions of the designer.

Detail. The Sather Tower, University of California
JOHN GALEN HOWARD, Architect

The composition is clearly set forth here in the illustrations, but the the above fact must be kept steadily in mind if one is to be in real touch with it.

It is not possible, of course, in so brief an article to go into the details of the general plan, either to criticise or praise; but, before leaving it, I would like to advise any architect who loves monumental planning to do what I have done — trace the development of this scheme, see its successive studies on paper, its changes and growth, and then compare all this with the final conclusions.

I miss my guess if he is not amply repaid for the time spent and does not, like myself, hope that during the many years of constructive work that must still occur, the same hand may remain to steer the ship and keep the scheme as it has been thus far, a living organism.

After this glimpse at the university as a whole, we come to its consideration more in detail. First its groups or units, then its individual buildings; and here again we find the same adhesion to a general guiding idea in its architecture, coupled with an obvious effort to avoid anything like strict uniformity, which too soon becomes monotony.

It is evident that there has been to the designer a clear underlying thought controlling each conception. For instance, in the Mining Building we have a pre-classic type, representing, as nearly as architectural forms

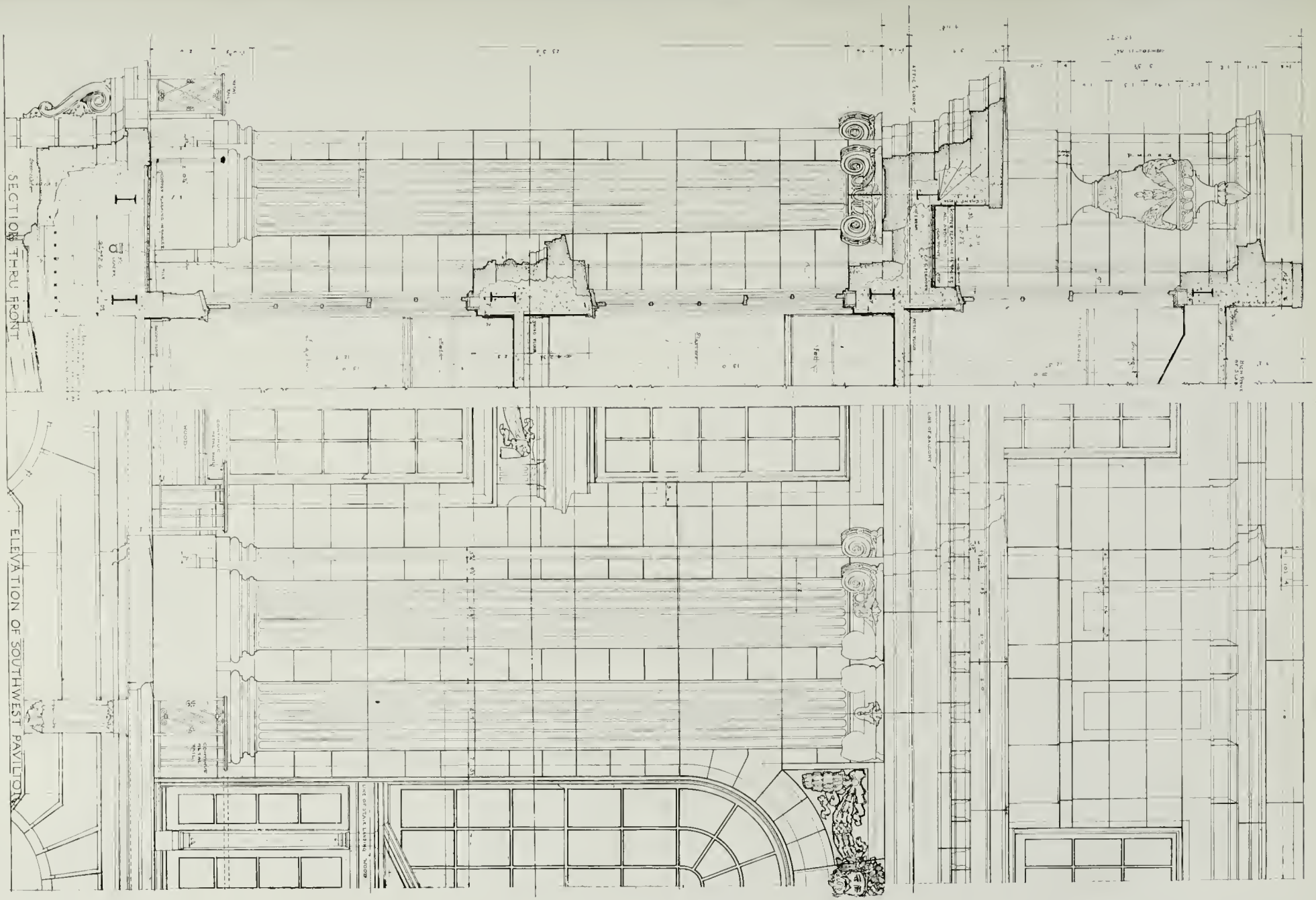
(Continued on page 119)

BENJAMIN IDE WHEELER HALL AND UNIVERSITY LIBRARY. UNIVERSITY OF CALIFORNIA

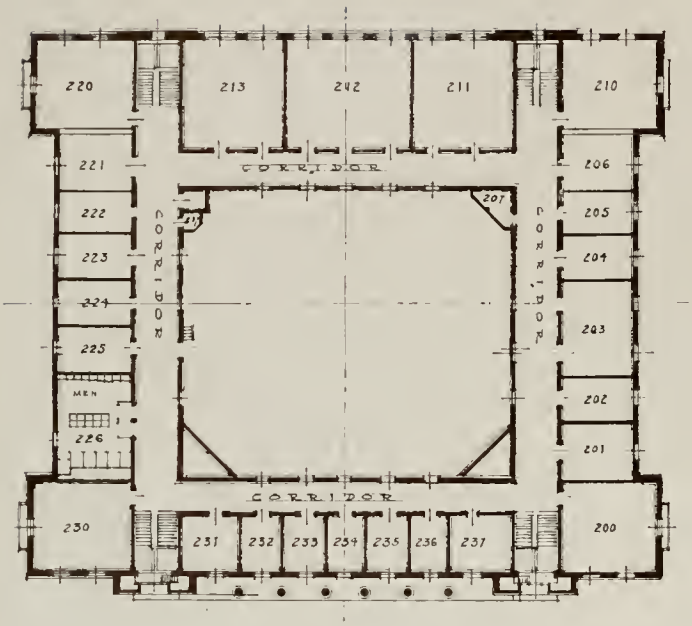
JOHN GALEN HOWARD, ARCHITECT

SOUTH FACADE, BENJAMIN IDE WHEELER HALL, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

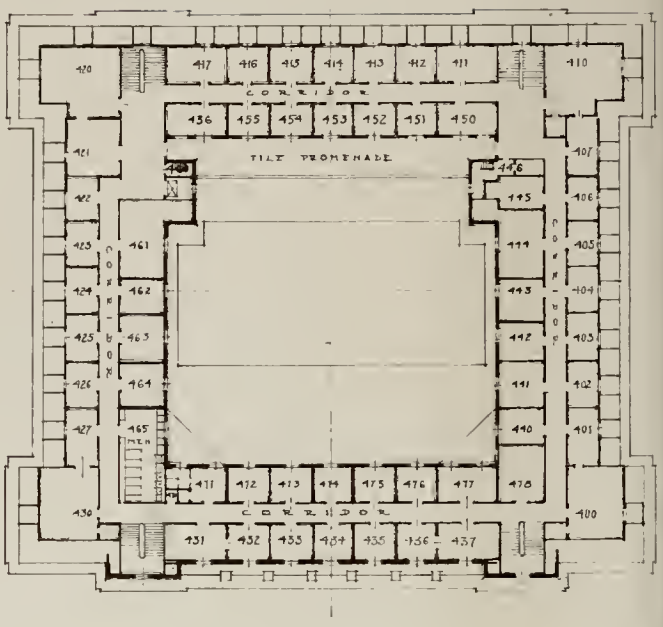
DETAIL, BENJAMIN IDE WHEELER HALL, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT



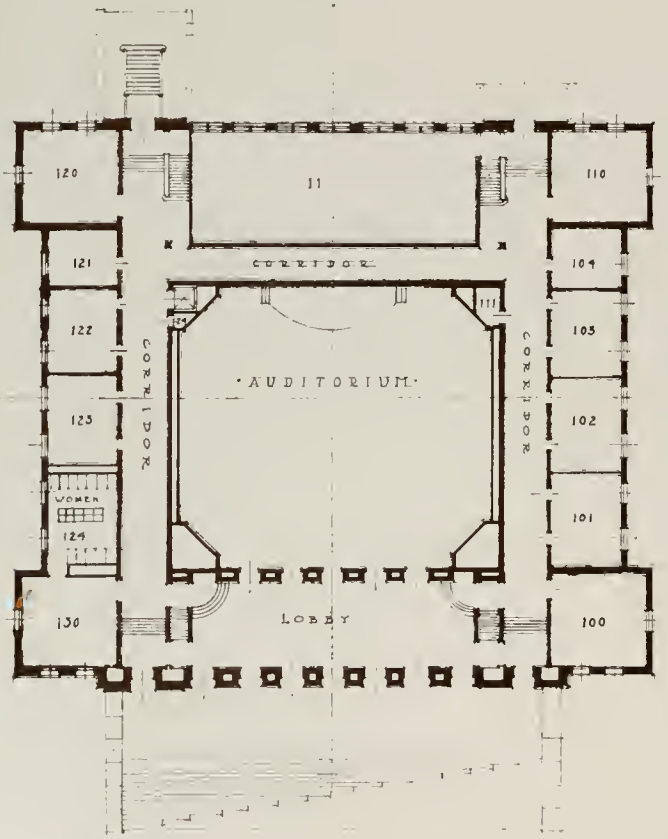
EXTERIOR DETAILS. BENJAMIN IDE WHEELER HALL, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT



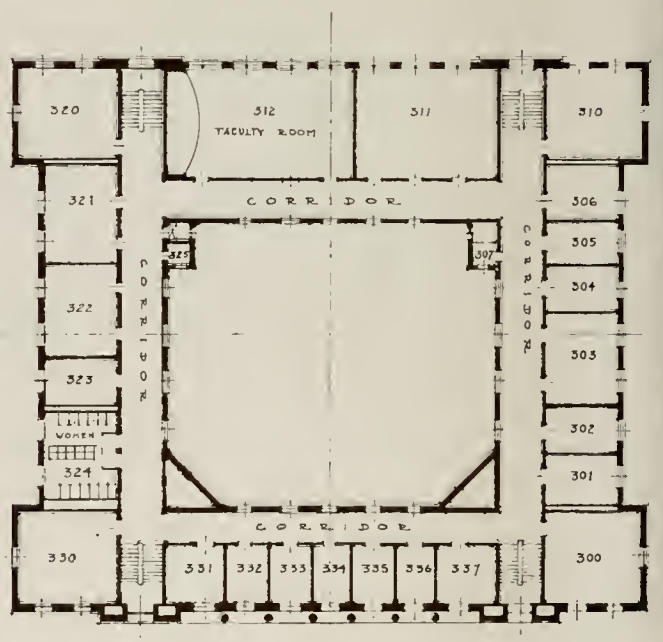
SECOND FLOOR PLAN



ATTIC FLOOR PLAN



FIRST FLOOR PLAN



THIRD FLOOR PLAN

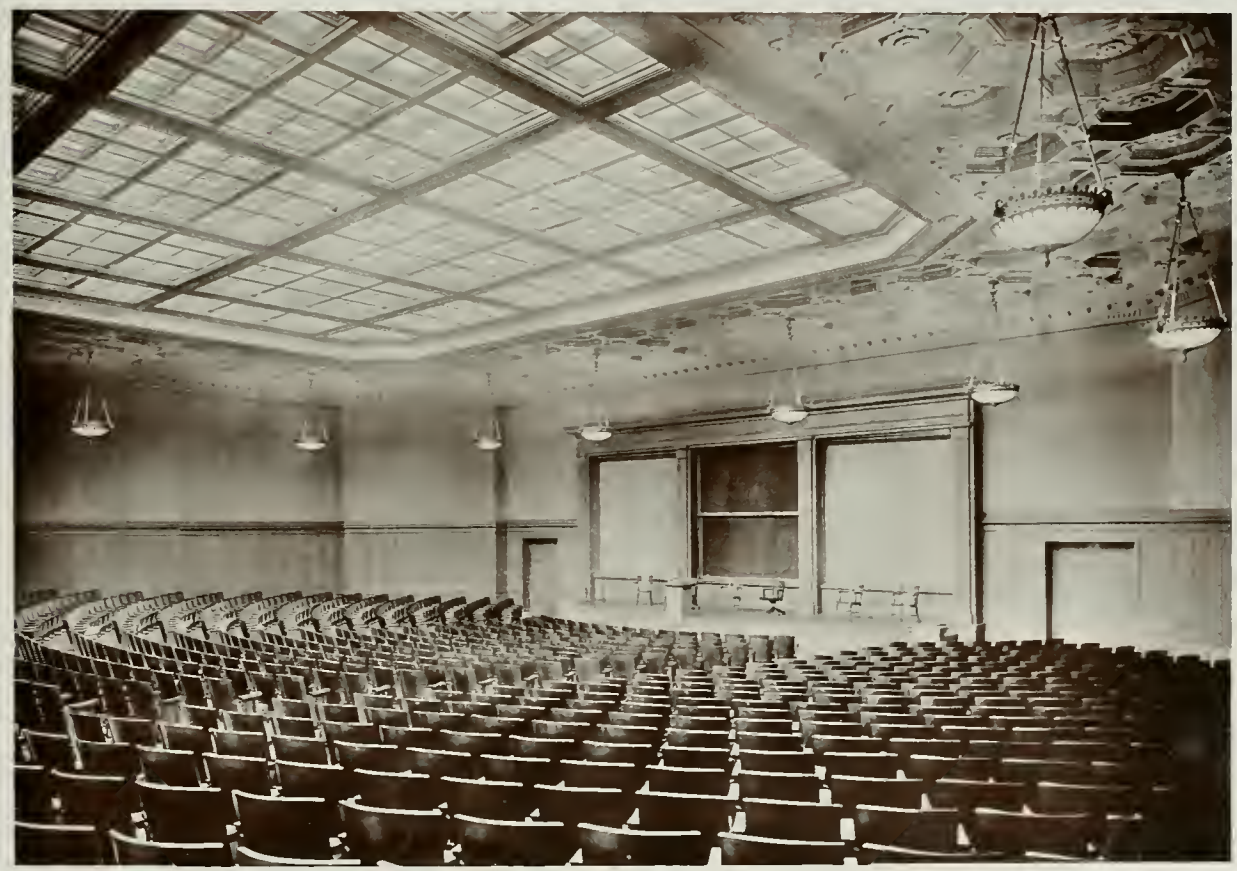
PLANS, BENJAMIN IDE WHEELER HALL, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD ARCHITECT

ENTRANCE LOBBY

LECTURE ROOM

BENJAMIN IDE WHEELER HALL, UNIVERSITY OF CALIFORNIA

REAR OF AUDITORIUM



FRONT OF AUDITORIUM

BENJAMIN IDE WHEELER HALL, UNIVERSITY OF CALIFORNIA

JOHN GALEN HOWARD, ARCHITECT

FACULTY ROOM

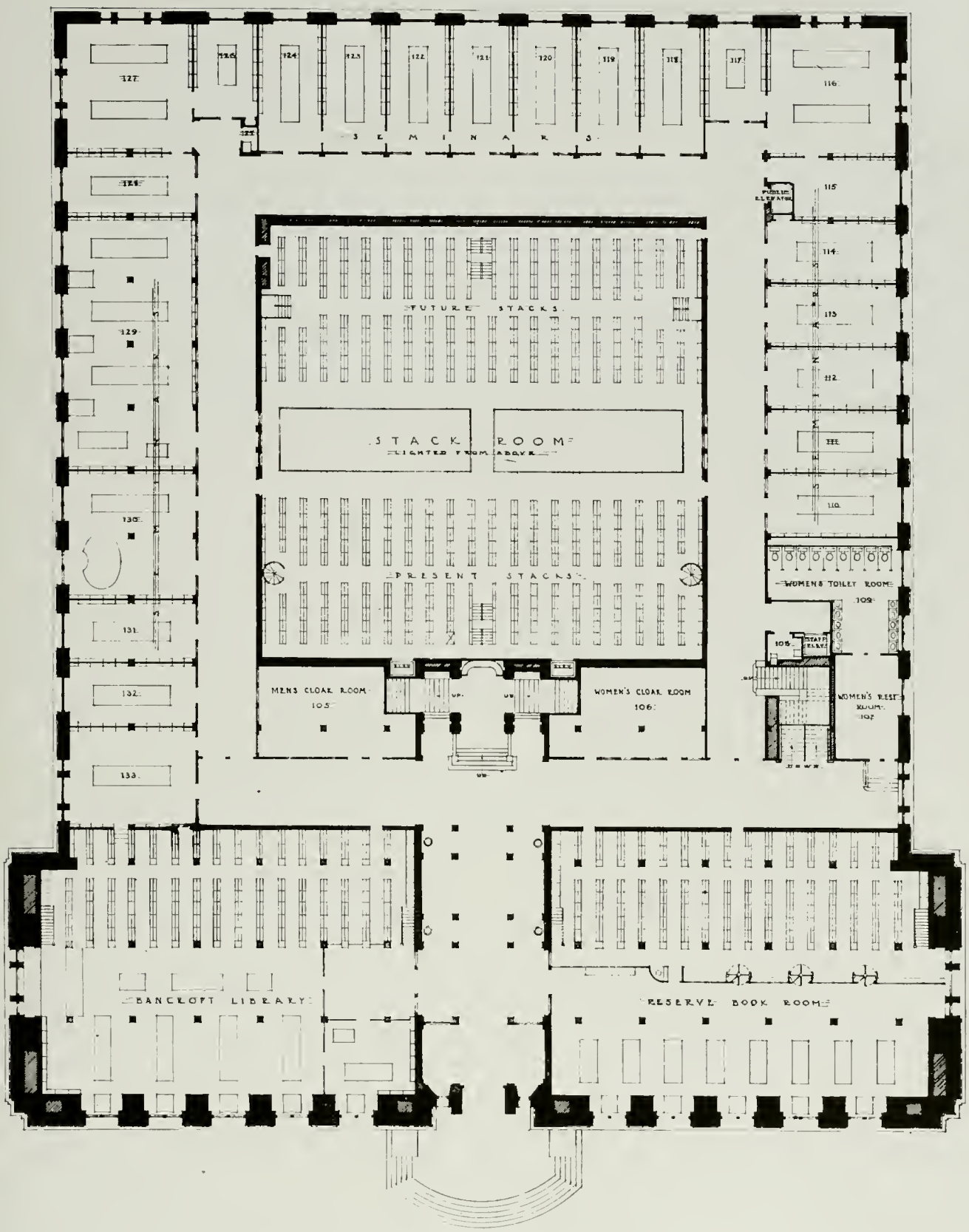
CLASS ROOM

BENJAMIN IDE WHEELER HALL, UNIVERSITY OF CALIFORNIA

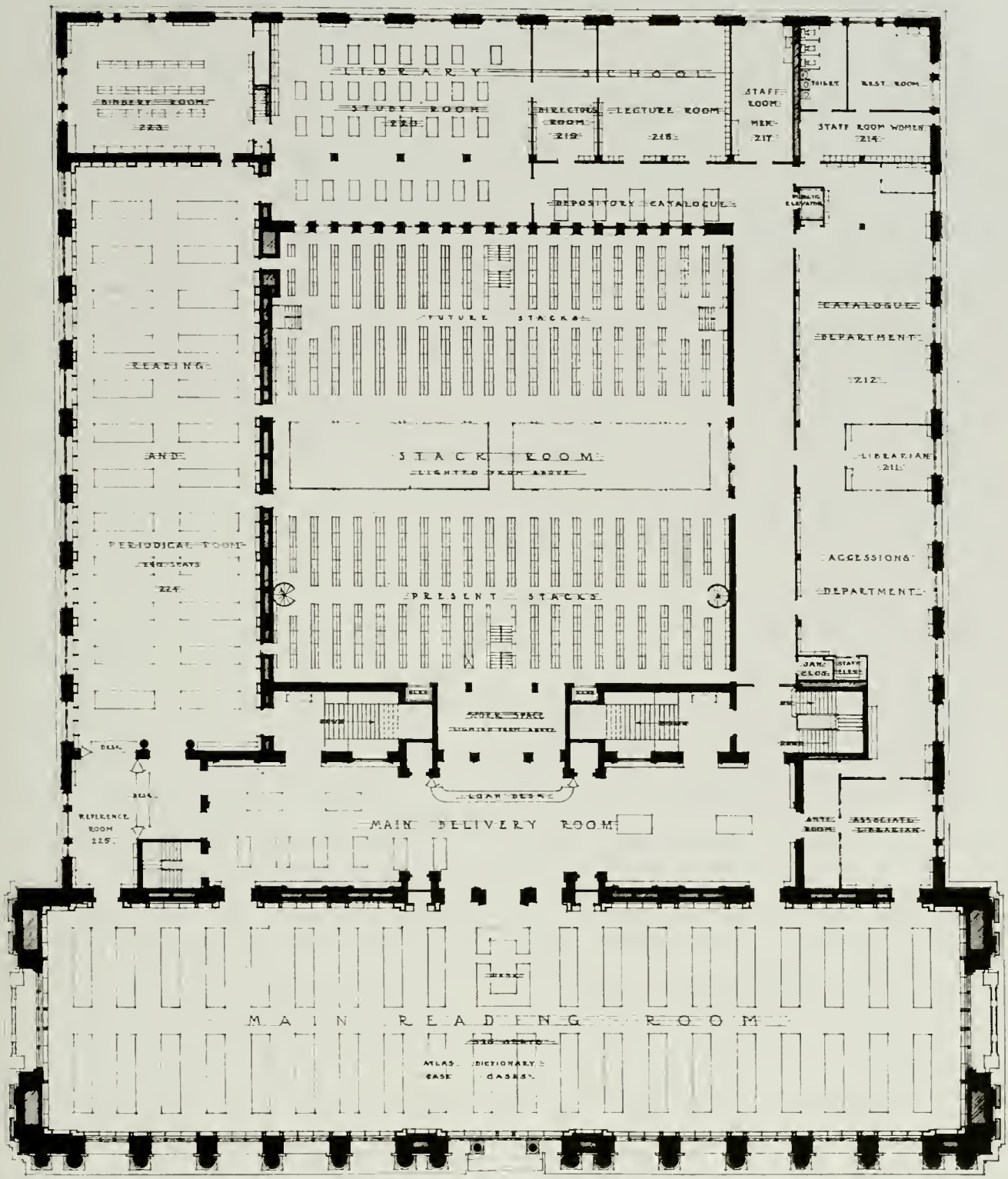
JOHN GALEN HOWARD, ARCHITECT

THE UNIVERSITY LIBRARY, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

ENTRANCE, THE UNIVERSITY LIBRARY, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD ARCHITECT



PLAN OF FIRST FLOOR, THE UNIVERSITY LIBRARY, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT



PLAN OF SECOND FLOOR, THE UNIVERSITY LIBRARY, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

DELIVERY ROOM

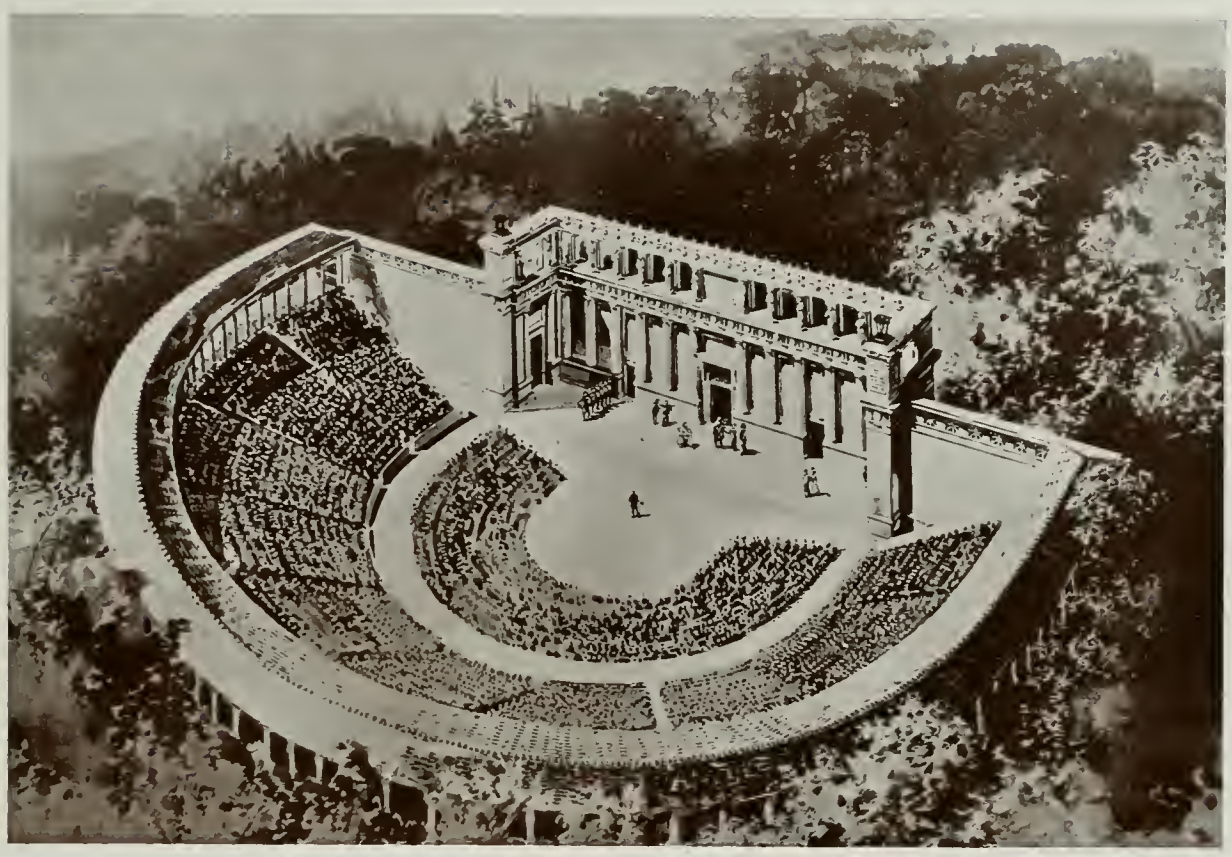
READING ROOM

THE UNIVERSITY LIBRARY, UNIVERSITY OF CALIFORNIA

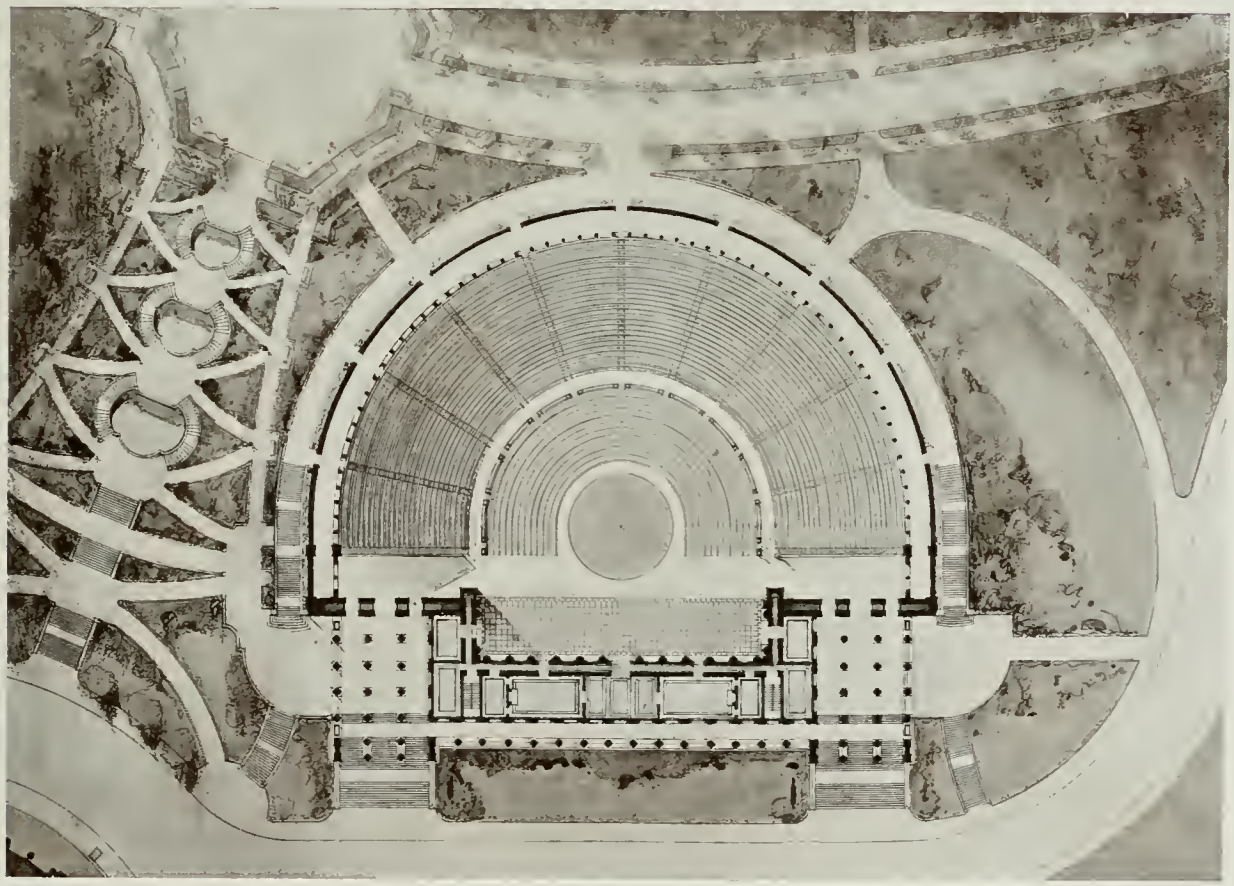
JOHN GALEN HOWARD, ARCHITECT

SKETCH FOR A BRIDGE AT COLLEGE AVENUE

MEN'S SENIOR HALL
UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT



PERSPECTIVE OF COMPLETED BUILDING



PLAN OF COMPLETED BUILDING

THE GREEK THEATER, UNIVERSITY OF CALIFORNIA

JOHN GALEN HOWARD ARCHITECT

THE GREEK THEATER

CALIFORNIA HALL
UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

BOALT HALL OF LAW

THE HEARST MEMORIAL MINING BUILDING
UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

may, the feeling of rugged strength and virility which one associates with the profession it represents.

The Greek Theater, on the other hand, is, to a large degree, an archeological study, as must of necessity be the case if it remain a Greek Theater! But what a far cry from this to the splendid conception of Wheeler Hall, representing, let us say, the early American College of the Humanities, and then on to the Agricultural Group — really a great, glorified Tuscan farm; or to the stately, classic building for the Library. So we may go on through the campus, finding in each of these examples fitting material to exhaust the scope of such an article as this. Alas! it must be for a better pen than mine — and I shall content myself with touching only on what seems fairly representative of all that has been done, namely, the Library, Wheeler Hall, the Agricultural Group and the Tower.

The Mitchell Monument, University of California
JOHN GALEN HOWARD, Architect

Probably few buildings have been erected in the vicinity of San Francisco which first and last have created more discussion than the Library. I can recall the most violent arguments among our profession as to whether the facade should have carried through without interruption— and, far more important, could there ever possibly be any use for such a colossal Reading Room as was being provided, the answer most often received being no. Several times of late I have had occasion to visit that room of noble proportions, and each time hardly a vacant table! As in the general plan the answer to the paper criticism lies on the ground; nor must one forget that, in addition to this space, there has just been completed another large Reference Reading Room, delightful in design and coloring, which no one should miss seeing.

I broached the subject of the much-discussed facade one afternoon, and Mr. Howard's attitude toward it was so interesting that I shall quote it as nearly as I can. "It is, of course, debatable whether the decorative effect might not have been better if the colonnade had been carried through uninterruptedly. That would have been the old-fashioned way, at any rate. But the interrupted rhythm in the center accuses an internal penetration and unification, and is essentially organic, as will be seen at once on studying the structure as a whole. Personally I feel that the door to the future development of architecture is in just such innovations as this."

What I like among many things in the Library is the particular fact that it seems so perfectly to serve its purpose; it gives a feeling of adequacy, of knowing why it is there, of being conscious that it is "doing its bit" quite easily and simply, maintaining with it all an air of distinction and repose. Some buildings do give one that feeling, just as others seem like a fussy man doing a big job.

I hope the day is not far distant when it may be possible to complete the color scheme of the interior in a manner befitting the design.

Wheeler Hall carries a very clear message, and on seeing it one instinctively feels that it should house the departments of Literature, Fine Arts, History, Languages — all those things which tend to foster and develop the finer side of mankind.

Its architecture makes a simple, direct appeal to one's sense of refinement and good taste and seems to hark back to the days of our Colonial forefathers when living was a much less complex affair than at present and when questions of deportment and dignity took equal rank with more material things.

I hope the members of the faculty who "have their

being'' in Wheeler Hall realize what an equipment has been provided them. Never have I seen a building of its kind more perfect in the three great essentials — Arrangement, Light and Acoustics. I have examined it in the most critical spirit, and it seems devoid of troubles or defects. It is a masterly handling of a problem (from the large auditorium to the small classrooms) that has long given trouble and has here been solved!

The large auditorium is a splendid example of what such a room should be — restrained in design, happy in the choice of materials, softly and harmoniously lighted by day or night, perfect in its acoustics, and finally an agreeable and well-studied color scheme.

Prove this quite simply by attending any sort of function in the room; you will find nothing that distracts your attention from the platform. Also a special word must be spoken about the acoustic qualities of all the rooms in Wheeler Hall. The subject has been given careful study, the most modern method employed, and it is a real pleasure to say the result is most satisfactory in each and every case.

That a departure from the established use of granite in some of the later buildings has been found necessary cannot but be a matter of regret; that it is a necessity must go without saying, and we must add to this the hope that the decision will justify itself.

SKETCH OF STADIUM

At first blush I admit this does not seem probable; but if the possibility exists, the treatment of the Agricultural Building, now in process of completion, will go far to realize it.

A glorified Tuscan farm, I think I called it, and I have no wish to change. Treated in cement, with a surface texture which is charming, and with the addition of colored ''sgraffito'' in panels and pilasters, Mr. Howard has created a background of just the right note for his simple Doric colonnade, which dominates the composition.

It is an unusual building— one might wish, indeed, that the color treatment had been carried much further — and seems expressive of its use in a greater degree perhaps than any other building on the campus. Its tone and appearance after it has properly ''weathered'' will be a matter of interest, and I trust it may prove the forerunner of a discreet use of this form of color in some of our future buildings. It is a field full of possibilities.

And now we come to the Tower. Purposely I have not spoken of the Tower until the end, because I have a dislike for superlatives and it is difficult in this case to avoid them. Mr. Howard told me that to him it was an expression of the ideal in university life. I hope the university ideal will always measure up to the beauty of this example!

(Concluded on Page 133)

SKETCH OF SATHER TOWER AND ESPLANADE

SKETCH FOR THE AGRICULTURE GROUP

UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, Architect

Public Architectural Bureau System
vs.
Employment of Private Architects

By WILLIAM MOOSER

WE have, in this city, again been treated to that old argument constantly used by some public officials, newspapers and others in the controversy regarding architectural work on public buildings, as to whether it is more economical to maintain a "bureau" for the planning and designing of public buildings or to have the said work given out to private architects for a stipulated fee; in the latter case, the city retaining only the control of the work as to letting of contracts, and the actual superintendence of the work by inspectors, aside from the general supervision done by the architect, as is the case in any and all work.

Reading Room and Library, Boalt Hall of Law, University of California
JOHN GALEN HOWARD, Architect

However, on this occasion the argument becomes more interesting inasmuch as it is touched upon in a report made by the Bureau of Municipal Research under the auspices of the San Francisco Real Estate Board, and therefore bears all the earmarks of being semi-official.

At the outset, this Bureau is to be excused somewhat for its findings as presented on pages 556 to 559 inclusive, having used an "official report" made by the then City Architect for the fiscal year 1908-1909. If there be any complaint from the architectural profession as to this following comparison, the blame, apparently, is on the profession.

I suppose it is human nature for one who holds a certain position (political) in either city, State or nation, to indulge in that irresistible effort to show those in authority "*why I should hold the job.*" Unfortunately "I" forget that the "wheel of fortune" never stands still; and then some day "I" awaken and find that "I" have been swept out along with the rest that went before. But "my" reports are not swept out; and hence, in this particular case, up bobs a report, and is used by a "Bureau of Research" to prove to the taxpayer how the city's funds are wasted, and, incidentally, in favor of a system that the American Institute of Architects has and is still endeavoring to abolish, viz., The Bureau System in Public Work.

Before analyzing the figures of this report, as published and recopied here and made so much of by the public press, let us first attempt an analysis of the report of the Bureau, irrespective of dollars and cents.

COPY OF REPORT

PREPARED FOR THE SAN FRANCISCO REAL ESTATE BOARD BY THE BUREAU OF MUNICIPAL RESEARCH

The Designing of Public Buildings by Private Architects Discussed—The question of the advisability or non-advisability of a department of architecture for planning and designing public buildings has been raised often in different cities and States throughout the country. There are two principal points, both of which need serious consideration in organizing and in laying out the administrative procedure of

an official architectural division: (1) The fact that a bureau of architecture is a staff agency whose activities depend upon the decision of other administrative bodies; (2) the fact that excellent architectural service can be secured from private architects.

The two factors which should determine the course of reasoning are the cost and quality of the architectural service. The cost of doing work by private architects in San Francisco amounts to 6% of the total value of work done, plus an amount equal to from ½% to 1½% for inspection. The question resolves itself, on the cost side, into a consideration of the specific point of whether or not the bureau of architecture could design and inspect the construction of buildings at a cost less than from 6½% to 8%.

Certain Classes of Buildings Adapted to Design by a Continuing Organization—In certain classes of buildings, such as school houses, fire houses, police houses, etc., where the design is a continuing plan and where the architectural work consists merely in adapting a more or less standard plan to a different lot size, there is little doubt but that the bureau of architecture could handle this work more cheaply than private architects—probably for half the expense. In very large undertakings, such as the building units making up the Civic Center group, it would be doubtful whether the bureau of architecture could handle the work at a cost less than it could be handled by private architects.

Granted that such reasoning is sound, the conclusion obviously would be that where the architectural work consisted in the re-adaptation of a more or less standard plan to a new location, the kind of work which would be encountered in the design of ordinary school houses, *fire houses, police stations*, etc., be done by a bureau of architecture, and that the practice of assigning these construction jobs to private architects be abandoned. However, one other point needs consideration, and that is the organization of the personnel of the bureau of architecture.

Care in Administration Needed—A bureau of architecture is a staff agency. Whether or not it has any work to do depends upon the administrative decision of other administrative officers. If the school board decides not to construct any school buildings, the work of an official bureau of architecture would be decreased. If the fire board decided to construct a great number of fire houses, the work would be increased.

It is not possible for any administrative officer at the head of a staff service agency like the bureau of architecture to estimate in advance the work requirements of his department. Consequently, if the personnel of a bureau of architecture is handled on "salaries regular employee basis," one of two results occur—either the architectural work is slighted during a peak load period on account of lack of force, or during slack work season a large force is carried on the rolls at a complete loss in order to be ready to take up work whenever a demand may be made upon the organization.

A bureau of architecture should be organized as an elastic unit. There should be very small permanent force as a nucleus around which a temporary force could be built up when the requirements of the work made necessary an increase in the output of the department. Thus, it is not practicable to handle the personnel costs of a bureau of architecture on a straight budgetary service appropriation basis without either wasting money or impairing the effectiveness of the work.

A Special Authorization for Architectural Service—What could be done would be to have included in the authorization of every public building special authorization for architectural and inspectional service on a percentage basis. It is thought that on work such as *fire buildings and school buildings*, this percentage, inclusive of inspection, should not *exceed four per cent.* The bureau of architecture, after such an authorization, should then be required to design and supervise the building within the amount of the percentage allotment made. Unless provision for elasticity of this sort is made, it is extremely doubtful whether the use of a bureau of architecture for the design and supervision of public buildings, even of the fire house and school building type, would be productive either of better work or more economy.

This has been the experience in other places and was the experience here in San Francisco in the earlier part of the existence of the bureau of architecture.

Recommend That Part of the Work Be Handled by Bureau of Architecture—It is recommended, therefore, that if the personnel costs of the bureau of architecture be appropriated by an allotment of a per cent of the total cost of the building operation proposed, the bureau of architecture be used entirely for the design and supervision of construction of buildings, such as fire houses, school buildings, police stations and the like. It is interesting to note, in this connection, that the bureau of architecture provides plans and specifications for use by private architects who are employed to design and supervise the construction of this class of public buildings. In the last school building constructed, which was delegated to the bureau of architecture, the costs for designing and drafting amounted to 1½% to 2%, respectively, as compared to the 6% now paid to private architects.

Cost of Preparing Plans—During the examination of the files of the bureau of architecture, it became evident that there was a possibility for a saving in the cost of architectural service through more effective use of the force of the bureau of architecture. *At the request of the examiner, the chief of the bureau of architecture prepared a statement of the cost of plans in preparation during the period when the bureau or architecture was engaged in the design of public buildings. Notwithstanding the fact that during this period the bureau of architecture was admittedly overmanned, the cost figures are considerably lower than the 6% now charged by private architects.*

The following quotation from a special report of the bureau of architecture shows conclusively the possibility of effecting a substantial saving in this work:

"Regarding the cost of preparing plans, a statement showing operating expenses of the bureau up to 1910 gives the cost of the plans at .030?%. This figure was based on contracts awarded amounting to $2,505,500, for the construction work of twenty buildings. Since the appointment of the consulting architects, it has been the policy of the Board of Public Works to appoint private architects; however, plans for a number of buildings have been prepared in this bureau."

There invariably comes before the architectural profession that oft-repeated argument made by the "layman," if he be one of a "Bureau of Research" or a "Congressman," talking against time, viz., the question of "Standards." One almost hesitates to argue upon this question, for it seems impossible for the lay mind to either understand or appreciate the immense amount of labor involved in producing that which, when completed, seems such a "*simple lot of drawings.*"

"Standards"—fine word. To be sure, there are "standards" for everything. Standard units. And, mark you, the architect's problem presents itself only when he begins to assemble these "standards" (or units), giving to each, as his experience and ability dictate, its proper place in a complete and harmonious plan and design. Nearly all lots vary in dimensions, location, grade, environment, etc., etc.; and no matter how many standard units there are available, there are definite, positive variations in each new problem that require intensive study in the assembling, and in the final production of a complete, practical and artistic plan and building. And I take it for granted that not even the most enthusiastic disciple of the "Standard" would wish to carry the argument to its logical conclusion and insist that, to be finally effective, economically (taking the schools for example) the *designs* should be "standardized" as well.

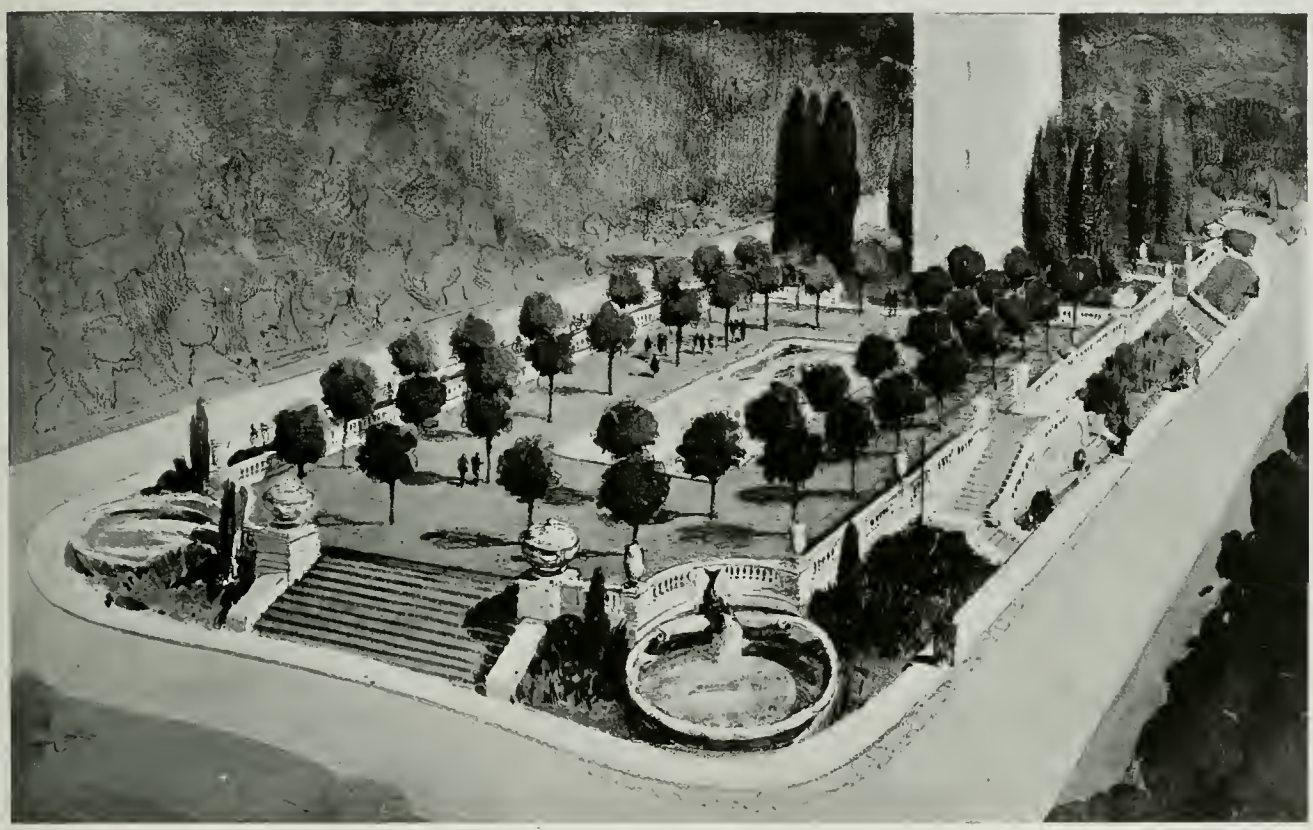
The truth of the matter is that no one would desire that Standards be used, if it would mean the total sacrifice of individuality and artistic, high-class work in our public buildings; and no city, desirous of classing itself as progressive and bidding for appreciation on the score of attractiveness, will do it. Furthermore, if the State, or, in this instance, the city, does not lead the way and set the example, it will certainly tend to discourage the individual.

Note: Auditorium is example of bureau work and with outside help.

At the end of the report of the "Municipal Research Bureau," a point is made that a statement was prepared by the chief of the bureau of architecture, at the request of the examiner for the said bureau, which shows that the bureau costs were considerably lower than the six per cent charged by private architects. But this report is not published. It would certainly have been interesting to see this last report and analyze it.

These broad statements are made all over the country. The chief in charge of the New York State Architectural Bureau in his last report makes the same claim; but *no figures are given;* and without full data, a mere statement is worthless.

The argument of "Standards" in buildings, as a basis for the establishment and maintenance of a bureau, will not work. The Federal Government some time ago appointed a commission, and, after years of work, published a large volume upon the question of Standards for postoffices, court houses, etc., etc.; *red-rubber-stamp plans*, "kept on tap" to be sent out to any district in these United States whenever a call is made. "Just change the foundation plan, and sections, and there you have your plans always ready, and the Government can save all kinds of money and dispense with the services of these expensive architects." Really, after reading the speeches of Congressmen in the *Record* and in the report published some time ago by the United States Commission on how to solve the question as to why the Federal Architectural Bureau is *seven years behind in its work* (result of bureau system), one almost loses hope of ever making the public realize the value of good architecture from an economic and utilitarian standpoint, to say nothing of the artistic side of the question. But, on the other hand, we still have fine public buildings, and private ones, too, and an ever-growing appreciative public, in spite of the fact that Government reports and municipal research bureaus are attempting to handle a question of "Art and Architecture" on the same plane with a purely mercantile affair on the plea of "How much will it cost?" or "How much can be saved?"



SKETCH OF SATHER TOWER ESPLANADE, UNIVERSITY OF CALIFORNIA
JOHN GALEN HOWARD, ARCHITECT

Just pause for a moment and read this very interesting and highly educational debate in Congress between Mr. Clark, chairman and author of a bill regarding public buildings, and Congressmen:

CONGRESSIONAL RECORD

MR. CLARK, of Florida: To govern it in the future, it says that hereafter they are to come up to that limit for three successive years.

East Doorway California Hall, University of California
JOHN GALEN HOWARD, Architect

Now we have in this bill provided for a system of standardization. The Treasury Department — and that is one reason why they are so behind in their work today—for every one of these little buildings they have had to draw separate plans and specifications, at a great expense and loss of time.

Mr. Barnhart: Will the gentleman yield?

Mr. Clark, of Florida: Yes.

Mr. Barnhart: The chairman of the committee says they had to draw separate plans and specifications. That was purely a whim of the department, was it not?

Mr. Clark, of Florida: They did do it, but they did not have to do it. The fact is they did do it, and wasted great time and incurred great expense. We put this provision in to force them to abandon that method. We have divided the States of the Union into groups by letter, according to topography and climate, and we have divided the towns and cities into classes, numbering them according to the postal receipts, and the smallest being $10,000 receipts a year. We have provided that whenever they draw plans and specifications for a town in one of these groups under a certain authorization they must use it for towns of that same size in the same group thereafter. That will save a great deal of money to the Government of the United States.

Mr. Burnett: But that is not all. We provide for the reorganization of the Supervising Architect's office and the inauguration of a commission. Suppose we pay a good architect $10,000 or $15,000 a year. Is not that cheaper than to pay these high-priced architects six per cent commission on every two or three million dollar building for which they prepare the plans and specifications? A $3,000,000 building at six per cent makes an architect's commission of $180,000. I believe it will take $10,000 a year to get an absolutely competent architect; but if it did, would it not be better than to pay an outside architect $180,000 every time a $3,000,000 building, a building of monumental size, is constructed? The big architects, many of them, throughout the country are fighting this bill because they know it will deprive them of the graft they are now getting from the Government, sitting like vultures, eager to prey upon the American treasury, and crying "Pork Barrel" and getting the great metropolitan newspapers of the country to denounce this bill as "pork." (Applause.)

Now for facts and figures.

I have before me the official report, 1908-1909, City of San Francisco, made up to show the cost of maintenance of the Bureau of Architecture and prepared for the City Architect, and which report was used by the Bureau of Municipal Research and copied by the press. Here is the language used; it is so wonderful, it stands alone:

SAN FRANCISCO MUNICIPAL REPORTS, 1908-1909

In comparison with other departments of Architecture, whether of municipalities or of corporations, the work of the Department of Architecture has been handled with great efficiency and economy. The drawings have been thoroughly gotten out at a cost which will show to the city a great saving over the work as previously handled under other administrations. The accompanying table shows the distribution of the expenses of the City Architect's office for the fiscal year, with the expenses incurred in handling all of the various projects. This table shows that the work of the office, not including inspection, has cost the city .0307+, slightly over 3%, and including inspection .035+, or 3½%. This includes all salaries, rents and expenses of any kind incurred by the department, whether they be out of the bond issue funds or out of the general tax levy, and is far less than the schedule of rates authorized by the American Institute of Architects. (Signed) Loring P. Rixford,
City Architect.

When the above report was completed and its findings and deductions became public, most of the architects came to either one of two conclusions, viz.:

(1) That its author very evidently sadly lacked experience in so far as his knowledge of the costs of maintaining an architect's office was concerned, or

(2) That the report was made purposely for use in maintaining the Bureau, in place of giving the work out to private architects—which latter system had been in vogue prior to the coming into office of the new regime.

Considered in the light of either of the above deductions, it had a dubious appearance; so a number of architects who were interested in the workings of architectural bureaus determined to keep an eye on the same and await events which would prove or disprove the findings of the aforesaid report.

In the year 1912, these same architects caused a report to be made which covered a period from March, 1908, to June, 1912, inclusive, and including a

period covered by the Rixford report. Accountants were employed and a minutely detailed statement prepared showing the actual cost of every piece of work done in this bureau during the four years ending June, 1912.

Reference to this report will show its thoroughness; it covers ten pages of closely typewritten accounts. In its recapitulation of the $8,026,589.37 expended for public buildings, it shows that without the salary of the City Architect, office rental, supplies, etc., the cost percentage of the work done by the Bureau is as follows: School houses, .065; fire houses, .092; police stations, .099; hospitals, hall of justice, etc., .06.

Exclusive of the items separately mentioned, the above shows an average cost of .07 (seven per cent). Including *all* items separately mentioned, the actual cost of the maintenance of the Bureau of Architecture for the completion of buildings costing $8,026,589.37 was .0765—nearly seven and two-thirds per cent.

This cost takes in the salaries of the three Civic Center consulting architects for a period of only three months; therefore the heavy expense for the said salaries (perfectly justifiable considering the work involved) cannot be construed as a reason for the high cost of .0765.

In an analysis of the reports of the Federal Supervising Architect's office from 1905 to 1910, inclusive, we find that the Government pays approximately for its services eleven per cent on the cost of the buildings when done in the said Supervising Architect's office, whereas the private architect is paid just six per cent; a small additional sum—about one per cent—must be added to sum paid the private architect to pay for clerical service in the bureau. Therefore, by awarding the work to private architects, the Government's own report would show a saving of from three to four per cent; furthermore it is an unquestionable fact that the result is a higher type of public work, artistically, and as heretofore mentioned, "from an economic and utilitarian standpoint."

West Doorway California Hall, University of California
JOHN GALEN HOWARD, Architect

CITY OF SAN FRANCISCO, 1908-1912

Sundry Buildings	Pay Rolls Architectural Dept.	Outside Services, Plans, Drawings, Specifications, Color Scheme	Blue Prints	Total Pay Rolls, Outside Services, Blue Prints, Etc.	Construction
School Houses	$223,546.35	$68,416.13	$10,074.43	$302,036.91	$4,612,659.67
Fire Houses	26,030.70	703.25	997.05	27,731.00	288,050.73
Police Stations	16,592.50	.....	699.48	17,291.98	178,057.27
Other Buildings	185,437.15	3,600.90	7,334.09	196,372.14	2,947,821.70
	$451,606.70	$72,720.28	$19,105.05	$543,432.03	$8,026,589.37

Architectural Department—Pay Rolls		$451,606.70
Outside Expert Service—Cost Advice, etc		72,720.28
Blue Prints—As per Bills		19,105.05
Additional—Total		$543,432.03
City Architect— Salary, July, 1908, to June, 1910	$10,983.25	
Draftsmen— Salaries, July, 1908, to June, 1910	6,362.50	
Stenographers— Salaries, July, 1908, to June, 1910	4,781.65	
Draftsmen— Salaries, March, 1908, to Dec., 1908	11,072.50	
Consulting Architects (3)— Salaries, April, May, June, 1912	5,700.00	
Office Rent—From 1908 to 1912	15,985.35	
Approximate Cost Supplies, etc.— From 1908 to 1912	16,409.88	71,295.13
		$ 614,727.16
Total Cost of Construction		$8,026,589.37
Total Amount of Pay Rolls, Expenses, etc		614,727.16
Percentage of Cost of Architectural Department, Pay Rolls, Expenses, etc., on Cost of Construction		.0765%

CITY OF SAN FRANCISCO, 1908-1912

Buildings		Draftsmen	Engineers	Stenog.	Surveyors	Quantity	Inspectors	Specifications	Estimators	Experienced Clerk	Watchman	City Architect	Total
School Houses	47	$106,349.80	$19,851.40	$ 5,293.70	$1,516.25	$ 4,790.85	$ 83,451.35	$1,402.50	$405.00	$485.50	$	$	$223,546.35
Fire Houses	18	14,676.15	1,270.25	670.90	422.50	580.30	8,246.00	.....	15.00	149.60	.....	.....	26,030.70
Police Stations	5	7,548.95	755.35	428.60	454.25	120.45	7,140.20	35.00	20.00	90.30	.....	.....	16,592.50
Other Buildings	4	97,431.55	26,732.55	3,670.65	304.85	5,002.65	50,163.40	665.50	110.00	.....	1,296.00	.....	185,437.15
Total		$226,006.45	$48,609.55	$10,063.25	$2,757.85	$10,494.25	$149,000.95	$2,103.00	$550.00	$725.40	$1,296.00	.....	$451,606.70
Total Pay Rolls Segregated		$226,006.45	$48,609.55	$10,063.25	$2,757.85	$10,494.25	$149,000.95	$2,103.00	$550.00	$725.40	$1,296.00	.....	$451,606.70
Pay Rolls Not Segregated													
City Architect from July, 1908, to June, 1910		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$10,983.25	10,983.25
Draftsmen, etc., from July, 1908, to June, 1910		6,362.50	.....	4,781.65	.....	.....	.....	.....	.....	.....	.....	.....	11,144.15
Pay Rolls, New Schools, from March, 1908, to December, 1908		8,653.35	1,112.15	310.05	.....	446.65	100.00	150.00	.....	.....	.....	.....	11,072.50
Consulting Architects													
John Reid, Jr., April, May and June, 1912		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,900.00	1,900.00
John Galen Howard, April, May and June, 1912		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,900.00	1,900.00
F. H. Meyer, April, May and June, 1912		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,900.00	1,900.00
Grand Totals		$241,022.30	$49,722.00	$15,154.95	$2,757.85	$10,940.90	$149,100.95	$2,253.00	$550.00	$725.40	$1,296.00	$16,683.25	$490,506.60

THE ARCHITECT

VOL. XIV. SAN FRANCISCO, AUGUST, 1917 NO. 2

Editorial.

THE leading article in this number of the ARCHITECT is, in a way, a progress report on the development of a great enterprise which will not be fully finished for many years to come. The recent completion of Sather Tower, the Library and Wheeler, Hilgard and Gilman Halls marks the accomplishment of a substantial part of the building program, and added to the Mining Building, Boalt Hall, California Hall, Agricultural Hall, the Greek Theater and Sather Gate, forms the nucleus and sets the standard and character for the buildings to follow and round out the carefully coordinated general plan.

The Sather Tower, University of California
JOHN GALEN HOWARD Architect

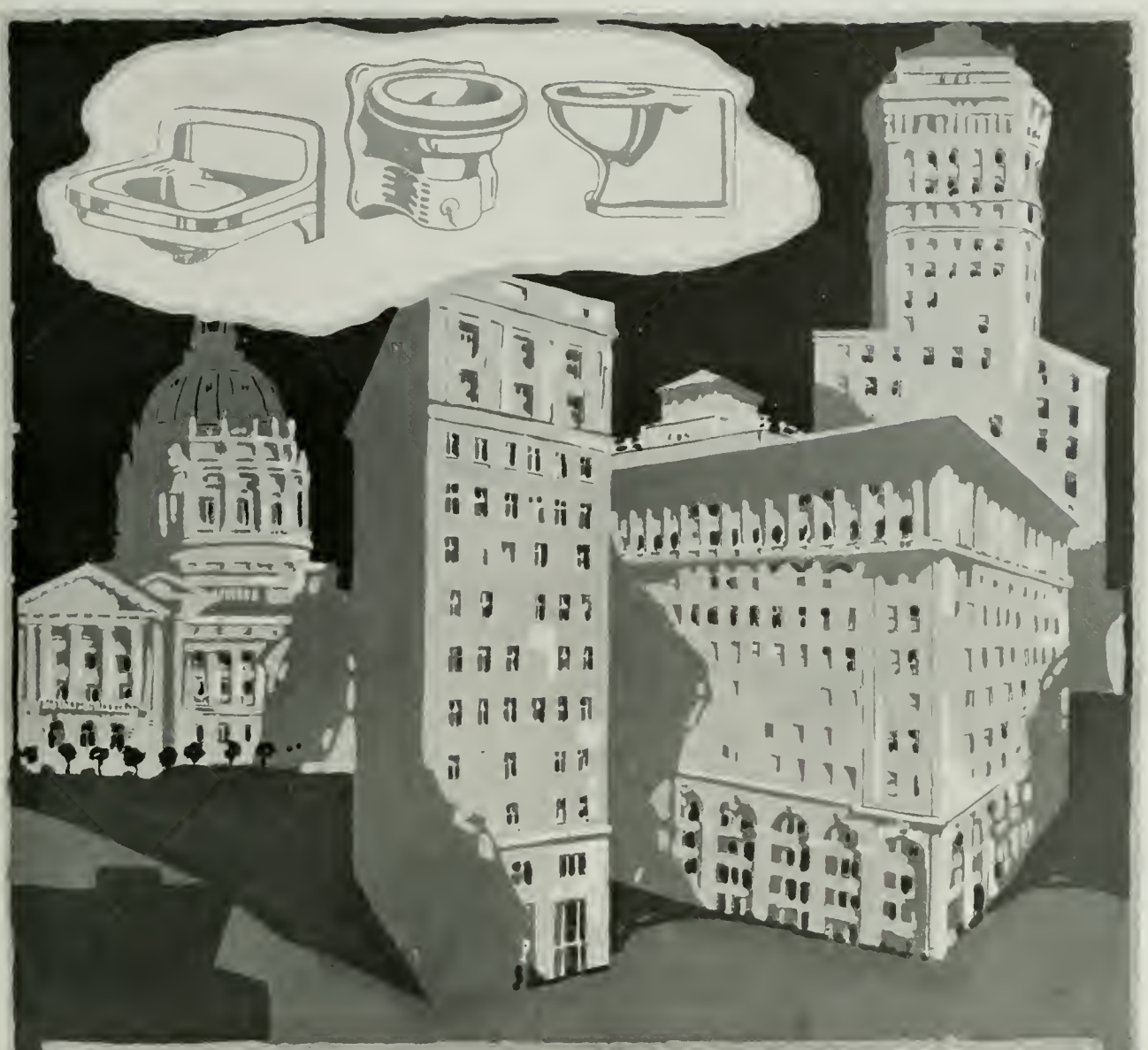
The development of the building program at Berkeley has been an interesting one. The idea of the general plan was one that had not received much thought from the business men of this country, the usual method being to build as the need arose without very much regard for general grouping. However, when the Leland Stanford University was organized, H. H. Richardson was called on to make an organic scheme for the buildings, and he evolved the very fine plan of the present university, and when, about twenty-five years ago, it began to be apparent at Berkeley that the existing buildings were inadequate, and that many new buildings would have to be constructed, Bernard Maybeck advanced the idea of the establishment of a general plan and policy which should guide the grouping of all future construction and fix the type of design, to the end that the completed university should present a composition qualified by unity and beauty. By his fervent enthusiasm for this ideal, and his patient advocacy, he finally succeeded in interesting the Regents, and, with the generous aid of Mrs. Phœbe A. Hearst, a competition on the broadest lines was instituted. If we remember correctly, $100,000 was set aside to conduct the competition and carry out the judgment. Mr. Maybeck went to Europe to interest foreign architects and to arrange for an international jury, and employed Jules Gaudet, professor of theory at the Ecole des Beaux-Arts, to edit and write the program.

The program was launched and many noted men all over the world sent in designs. The compositions submitted were varied and interesting, and many splendid ideas were evolved and great interest stimulated in the subject of plan composition.

The international jury met in California, and the Bénard plan was selected from a number of very brilliant efforts. When it came to the point of adjusting the preliminary plan to the actual building program, and of designing the various units of the university, the task fell to Mr. Howard's lot, and how brilliantly he has met it is shown in our leading article.

The history of the building program at Berkeley shows positive progress in the attitude of the public towards the rational handling of big architectural enterprises, which should be very gratifying to the profession, and great credit is due the Board of Regents, who have had the wisdom and good judgment to consistently carry on the scheme.

—ARTHUR BROWN.



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Bakewell & Brown
Architects

Santa Fe Building
Wood & Simpson
Architects

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Official News of Pacific Coast Chapters, A. I. A.

The Architect is the Official Organ of the San Francisco Chapter, Southern California Chapter and Washington State Chapter, A. I. A.

The regular minutes of meetings of all Pacific Coast Chapters of the American Institute of Architects are published on this page each month.

San Francisco Chapter, 1881—President, Edgar A. Mathews, 251 Post Street, San Francisco, Cal. Secretary, Morris M. Bruce, Flood Building, San Francisco, Cal. Chairman of Committee on Public Information, William B. Faville, Balboa Building, San Francisco. Chairman of Committee on Competition, William Mooser, Nevada Bank Building, San Francisco. Date of Meetings, third Thursday of every month; Annual, October.

Southern California Chapter, 1894—President, J. E. Allison, 1405 Hibernian Building, Los Angeles, Cal. Secretary, A. R. Walker, 1402 Hibernian Building, Los Angeles, Cal. Chairman of Committee on Information, W. C. Pennell, Wright & Callender Building, Los Angeles. Date of Meetings, second Tuesday; except July and August at Los Angeles.

Oregon Chapter, 1911—President, Joseph Jacobberger, Board of Trade Building, Portland, Ore. Secretary, W. C. Knighton, 307-309 Tilford Building, Portland, Ore. Chairman of Committee on Public Information, Joseph Jacobberber. Date of Meetings, third Thursday of every month at Portland; Annual, October.

Washington State Chapter, 1894—President, Charles H. Bebb, Seattle. First Vice-President, Daniel R. Huntington, Seattle. Second Vice-President, George Gove, Tacoma. Third Vice-President, L. L. Rand, Spokane. Secretary, J. C. Coté, Seattle. Treasurer, Ellsworth P. Storey, Seattle. Counsels: J. H. Schack, J. Stephen and Charles H. Alden. Date of Meetings, first Wednesday, except July, August and September, at Seattle, except one in spring at Tacoma. Annual, November.

The American Institute of Architects—The Octagon, Washington, D. C. Officers for 1917: President, John Lawrence Mauran, St. Louis, Mo.; First Vice-President, C. Grant La Farge, New York City, N. Y.; Second Vice-President, W. R. B. Willcox, 400 Boston Block, Seattle, Wash.; Secretary, Burt L. Fenner, New York City, N. Y.; Treasurer, D. Everett Waid, 1 Madison Ave., New York City, N. Y.

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Descriptive catalogue, 5¼x8¼, 24 pp. Catalogue of details and specifications for application of roofing and siding, size 8½x11, 40 pp. Lists of buildings covered. Price lists, 3½x6¼, 6 pp., and literature of various sizes, samples, etc. "Service Sheets," working drawings, details of application, size 16½x21½.

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Current Notes and Comments

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The use of Johns-Manville Akoustolith as an interior facing in place of stone or tile opens up new possibilities to the modern architect, enabling him to meet the practical necessity of good acoustics without incurring prohibitive expense or limiting or delaying the design of the building in any way.

This firm treated successfully various rooms in the Wheeler Hall at the University of California.

War Painters Organize

A meeting took place July 9th at the California School of Fine Arts for the purpose of organizing a committee to be known as the American Camouflage, Western Division, with the object of recruiting painters, sculptors, scene painters, house painters and all others interested in the application of protective coloration and devices for the deception of enemies and the rendering invisible of our own forces.

The central organization in New York chose A. Sheldon Pennoyer, of this city, who was recently in the East and secured first-hand information from various sources already established, to start the organization of this new wartime activity here. The committee as formed in San Francisco is made up as follows: Chairman, Arthur Brown, architect; assistant chairman, Bruce Nelson, artist; secretary, A. Sheldon Pennoyer, artist; executive members: John I. Walter, president San Francisco Art Association; Edgar Walter, sculptor; E. S. Williams, scene painter, Alcazar Theater; Ralph Nieblas, scene painter, Columbia Theater; Warren C. Perry, instructor in architecture, University of California; Maynard Dixon, artist; Lee Randolph, director California School of Fine Arts.

The importance of invisibility and deception in war is now receiving attention of the War College in Washington, as shown by information and letters from military authorities now in the hands of the Eastern and Western division of the American Camouflenrs. The plan as outlined by the War College would include a group of thirty or forty painters to be attached to each division. The practice in Europe has grown to such an extent that it is reported two thousand artists have been withdrawn from the fighting units and assigned to the production of special scenery, embracing false cannons, houses, roads, stacks of ammunition, as well as tree trunks, boulders and dead horses so arranged as to contain observers.

Activities of this kind have been developed in the United States Navy, and first began over a year ago. It has been said that the results obtained by the use of several colors in small squares, map-like patches, serpentine lines and similar methods have rendered our ships more invisible than those of any other navy treated in this manner. With the organizing of the branch of camouflenrs here in San Francisco, there will be an opportunity for artists of every description to identify themselves with one of the most important special functions of the war. Membership is open to any one capable of rendering assistance to the American camouflenrs, or of serving as camouflenr. Blanks may be had from the Secretary, the American Camouflage, Western Division, at the San Francisco Art Institute, Mason and Powell Streets, San Francisco, or from any member of the committee.

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Western Divison
San Francisco Institute of Art, Mason and California Sts.
San Francisco, Cal
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Have you had any military training or experience?. .....

N. Clark & Sons have suffered a severe loss by fire at their factory in Alameda, which destroyed the main building, a four-story brick structure of large dimensions, creating a loss of approximately $250,000.

Fortunately that portion of the plant devoted to Architectural Terra Cotta escaped the fire, and the manufacture of this important product will not be interfered with. The building destroyed will be replaced by a modern plant at the earliest possible date, equipped with the latest machinery, and when completed it will be one of the most modern plants of its kind in the West.

A communication from Berry Bros. records the death of Mr. Thomas Berry, which occurred on May 24th, in the eighty-ninth year of his age.

Mr. Berry was one of the founders of the house, and its great success is largely due to his personal work and supervision in the manufacturing department during its earlier history.

It was Mr. Thomas Berry who devised and perfected Luxeberry Wood Finish. He also originated many other valuable formulas.

While his activities became more modified of late years, Mr. Berry maintained a keen interest in the growth and welfare of the business until the last, spending a portion of each day in his office.

The gentle manner and fine courtesy of Mr. Berry endeared him to all with whom he came in contact, and his mental grasp and unabated interest in affairs were remarkable in a man of his advanced age.

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The University of California

(Continued from page 120)

It seems to me beyond criticism in its proportions, simplicity and grace, besides possessing that quality so rare in all architecture, charm.

It does not seem to bear down onto the ground; it floats in the air; and whatever each of us may think of Mr. Howard's other achievements at Berkeley, he has given us here a legacy of which we may all be proud. A great deal might be written regarding its design and yet nothing would do it more justice than the simple phrase, "It is very beautiful," and so long as the Sather Tower remains, no one need ask a more fitting tribute to our craft.

Some of the work which has thus far been accomplished at the campus is shown in the photographs which accompany this issue. They tell their own story far better than any printed word can; words after all can only steer a little in the direction of the thought of design, and it is only the hope that I may help the reader to a clearer and sounder understanding of this thought that has prompted these few pages. It is a fine thing to carry on any great constructive work, and certainly all those who have been connected with the creation of the University of California should feel a keen satisfaction in the sound results thus far achieved.

Mr. J. B. Losey, Northwestern representative of Berry Bros., was a recent visitor in San Francisco, renewing his acquaintances among the architectural profession formerly called upon by Mr. Losey as a special representative of Berry Bros.

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VOLUME XIV · NUMBER 3
SEPTEMBER · 1917

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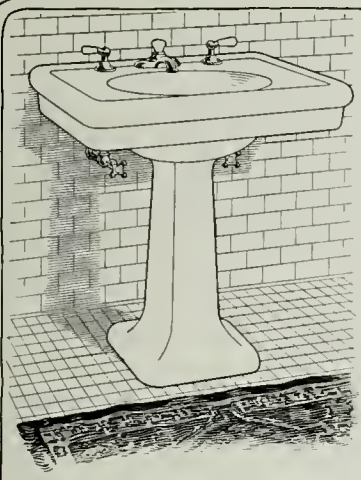

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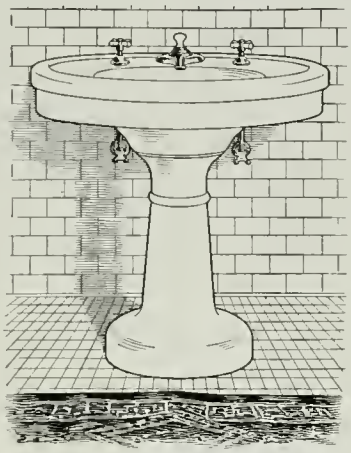

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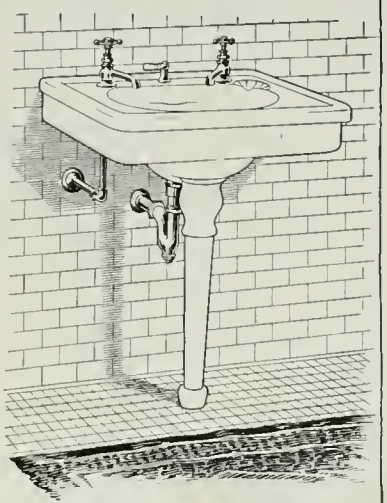

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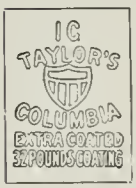

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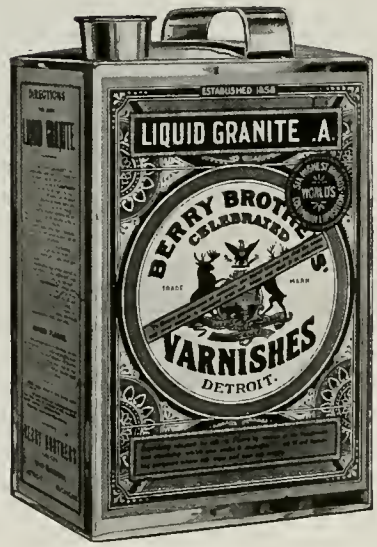

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Vol. XIV. No. 3

THE ARCHITECT

Published by
THE ARCHITECT PRESS

Associate Editors for September, 1917
JOHN J DONOVAN - San Francisco
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F A NARAMORE - - Portland

HARRIS ALLEN
EDITOR

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¶ Published in the interest of the architectural profession, on the first of each month, at 245 Mission Street, San Francisco. Entered as second class matter August 4, 1911. Subscription price in the United States and possessions, $5.00 a year; foreign and Canadian, $6.00 a year. Single copies, 75 cents each.

¶ Changes in, or copy for new advertisements, must reach the office of publication not later than the fifteenth of the month preceding issue. Advertising rates and any other information will gladly be given on application.

¶ The editor will be pleased to consider contributions of interest to the profession. When payment for same is desired, this fact should be stated.

LA PORTA, CHIESA DI S. GIOVANNI, LUCCA

THE ARCHITECT

VOL. XIV SAN FRANCISCO, SEPTEMBER, 1917 NO. 3

WEST FRONT, GROVER CLEVELAND HIGH SCHOOL, ST. LOUIS, MO.
WM. B ITTNER, ARCHITECT

Grover Cleveland High School, St. Louis, Mo.

By WM. B. ITTNER, F. A. I. A.

THE original program for this building called for an accommodation of 1,200 pupils, and a complete plan study was made for a school of this capacity. It was found, however, that a school having a capacity of about 1,500 pupils could be built at less than six per cent increase in cost, and it became evident that to build a manual training high school, with laboratories and shop facilities to accommodate only 1,200, would be an uneconomical thing to do. Moreover, the experience with the existing high schools seemed to bear out the contention that the larger unit would be more economical in its maintenance. St. Louis, therefore, determined to adhere to the policy which had governed the size of its existing high schools, and to erect for this school a building to accommodate 1,500 pupils, in fixed class room seatings, and to provide therein full manual training, domestic art and laboratory equipment.

The site purchased offered exceptional advantages. It contained about eight and one-half acres, having a frontage of 350 feet, and an average depth of 1,135 feet. The site is located in the southern part of the city, fronting Grand Avenue Boulevard, and extends two blocks to the east. The grade rose from Grand Avenue to the crest of the site, at which point the site was crossed by Louisiana Avenue, and from which it sloped gradually to Virginia Avenue on the east. This furnished a most advantageous setting for the building, as it enabled the fixing of the grade of the first floor about 25 feet above the grade of Grand Avenue, bringing the building into prominent view from the boulevard, and in turn giving a commanding view of the field from the terraces and approaches to the building; while the fall in grade towards Virginia Avenue gave opportunity for advantageous lighting of the rooms on the ground floor, and convenient approach to the boiler and fuel rooms from the rear.

Plans for the athletic field have been completed, and although the necessary grading has been done, this project has not yet been placed under contract. The natural slope of this portion of the site was particularly advantageous to the proper placing of the athletic field; the grade was fixed at the Grand Avenue level, thus creating natural embankments on either side against which to place the seats of the stadium on the remaining sides of the field. The athletic field, when completed, will contain a running track, four laps to the mile, a 100-yard straightaway, regulation

FORGE SHOP, GROVER CLEVELAND HIGH SCHOOL
WM B ITTNER, Architect

football field, regulation baseball field, regulation basketball and tennis courts, and a stadium seating 7,000 persons, as well as room for several thousand standing spectators.

A formal entrance is to be placed on the Grand Avenue front; the central axis terminating on the east end of the field in an athletic house to contain the preparation rooms for contestants, and toilet and office for physician and track officials, all of which will open on the track level. Four public comfort stations are to be provided to furnish the necessary accommodation demanded by so large an assembly of persons, and space for these is found under the raised seats on either side of the field. Outside of the field sufficient space is retained for walks and parking, thus providing adequate formal approach, as well as fitting setting for a building of this character.

The building, as indicated on the plans herewith, has a frontage of 298 feet on Louisiana Avenue, and has an extreme depth of 315 feet. It sits 43 feet from Louisiana Avenue, and an average of 65 feet from Virginia Avenue on the east, giving space here also for additional tennis courts and planting.

The building is two stories in height above the ground floor, with the central portion carried up three stories.

There are three entrances to the first floor from Louisiana Avenue, the main entrance being located on the central axis of the building; the other two entrances giving directly to the north and south secondary corridors and stairways. There are seven entrances on the ground floor, two from the north, two from the south, two from Virginia Avenue, and one from Louisiana Avenue, under the main entrance. There are four main stairways located at the intersection of the main and secondary corridors, thus providing for rapid circulation of the pupils and minimizing the travel distance between the various parts of the building. Each stair-

WOOD WORKING SHOP, GROVER CLEVELAND HIGH SCHOOL
WM B ITTNER, Architect

way is arranged in double flights to the second floor; the file of pupils passing down on one side will be independent of the file of pupils passing up on the other side of the stairway, making for perfect order and speed in the movement of pupils between classes. Two single flights of stairs are arranged from the second to the third floor. Two additional stairways are arranged to serve the gymnasiums, and may also be brought into service as emergency exits from the first floor and auditorium.

MACHINE SHOP, GROVER CLEVELAND HIGH SCHOOL
WM. B ITTNER, Architect

The main corridor on each floor is 18 feet wide, and secondary corridors are 10 feet wide, all having direct outside light. There are sixteen class rooms, the average sizes of which are 24 feet by 32 feet, and nineteen class rooms, 24 by 25 feet, making a total of thirty-five class rooms, containing a total of 1,452 fixed desks. All class rooms are unilaterally lighted, and are conveniently located with respect to corridors and stairways.

The laboratories are arranged in groups on the second floor, with demonstration rooms between, in the absence of which, amphitheaters are placed in the laboratories themselves.

The botany laboratories are placed on the ground floor to the south, and the group opens up into a conservatory. Laboratories are provided for physics, chemistry, physiography and physiology, as well as for botany.

The commercial rooms are grouped on the second floor and consist of a bookkeeping room with bank, and a typewriting room.

WOOD TURNING SHOP, GROVER CLEVELAND HIGH SCHOOL
WM. B ITTNER, Architect

Four art rooms are arranged upon the third floor, two for drawing and two for art craft work. They are arranged for top and side light, and open en suite with store rooms. The main corridor on this floor is arranged with top light, as a permanent art gallery or exhibit space.

The mechanical drawing rooms are placed upon the ground floor convenient to the

shops. Each room is 24 feet by 32 feet, and has north unilateral light.

The domestic science group consists of two sewing rooms, with fitting room and store room, a cooking room with store room and model dining room and a laundry.

The manual training rooms are placed in one-story shop wings to the rear of the building and outside its main walls. Five shops are provided. They consist of a woodworking shop, a wood-turning shop, with common stockroom, finishing room, wash room and lecture room; a forge shop, machine shop and moulding room, all having common wash and stock rooms. The machine and forge shops have joint tool room, and a generating room is placed in close proximity to the metal working rooms and boiler rooms.

The library is placed on the second floor over the main entrance, and is 28 by 57 feet. It is particularly well lighted, and has book stacks for 10,000 volumes along its interior wall.

ART ROOM, GROVER CLEVELAND HIGH SCHOOL
WM. B ITTNER, Architect

The auditorium occupies the center of the building on the first floor, the balcony being reached from the second and third floor corridors. Its ten well-distributed exits provide means for the rapid discharge of the room and the distribution of the pupils to the various parts of the building, with minimum corridor use. The room is lighted from the courts on either side, and furnishes comfortable seating for 2,000 persons.

The stage is unusually large, being 40 feet by 80 feet; is planned for an overflow gymnasium for girls, as well as for all high school uses, and by means of a sound-proof curtain, both auditorium and gymnasium may be used simultaneously, the stage space in front of the curtain being 15 feet by 72 feet. This room also affords exceptional opportunity for symphony concerts and large choruses, and a regulation basketball game may be played upon the stage in full view of 2,000 persons.

SEWING ROOM, GROVER CLEVELAND HIGH SCHOOL
WM B. ITTNER, Architect

The auditorium

PHYSIOLOGY LABORATORY, GROVER CLEVELAND HIGH SCHOOL
WM. B ITTNER, Architect

floor being on the same level with the gymnasiums, affords opportunity for their joint use for the social features of the school.

There are two gymnasiums. Each room is 40 feet by 80 feet, and is provided with a spectators' gallery opening from the second floor corridor, under which are placed the locker and toilet rooms for the instructors.

The swimming pool, with separate dressing rooms for boys and girls, permitting its use by either, is placed on the ground floor near the gymnasiums.

The lunch room is 100 feet by 65 feet, and is located under the auditorium. It has convenient service entrances, kitchen, pantry and lunch serving counter, and will accommodate 800 students at one lunch period.

The locker rooms are located on the ground floor, where locker provision is made for the entire school.

Adequate space is provided under the gymnasium for the heating and ventilating apparatus, and the boiler room, all of which are outside the walls of the main building. The boiler room has convenient fuel and ash rooms. The heating and ventilating system provides for adequate air changes throughout the building, with special ventilation for lunch room, toilets, etc.

The building is equipped with a vacuum system of cleaning, a synchronizing clock and bell system, an intercommunicating telephone system, and full and complete generating and boiler plant.

The equipment of the building has been worked out with a view of its simplification for the purpose intended, and is complete in every department.

The building cost, ready for occupancy, and including the improvement of the site, $666,000, or 18.33 cents per cubic foot. The cost of the equipment complete, including the generating plant, was $152,000. The estimated cost of the athletic field is $80,000.

TYPEWRITING ROOM, GROVER CLEVELAND HIGH SCHOOL
WM B ITTNER, Architect

Selecting An Architect for School Work

By SIDNEY D. TOWNLEY, Professor of Applied Mathematics Leland Standford, Jr., University

MODERN civilization has been so complex that no single person can obtain a thorough knowledge of more than a very few fields of learning. Each trade and profession has its specialists, and indeed the demands of modern society are so numerous and so exacting that we must have specialties within specialties, and our most highly trained men do not try to cover more than a limited part of their own field.

This is true in architecture as well as in other professions. Until comparatively recent years all buildings in a small American community might be put into four classes: dwellings, barns, stores and churches. Every community, of course, had its school, but there was nothing distinctive about this building, and it was often sort of a cross between a house and a barn—and this is perhaps not so surprising when we remember that the person employed to design the school was usually one whose only architectural training was that obtained in drawing plans for small dwellings and barns.

Fortunately, times have changed and progressive communities now demand for their children school houses which shall be something better than hybrid house-barns or barn-houses. Unfortunately we still have many poorly constructed, badly arranged, poorly lighted, badly heated, entirely unventilated schools. When we consider that the average child spends twelve years of the most critical period of his life in school, is it not a *paramount duty* of every community to provide for its children substantial, sanitary, well-arranged, up-to-date school buildings and equipment?

When a community decides to do this, the first, as well as the most important and the most difficult question that confronts the school trustees is the selection of an architect. How shall this be done?

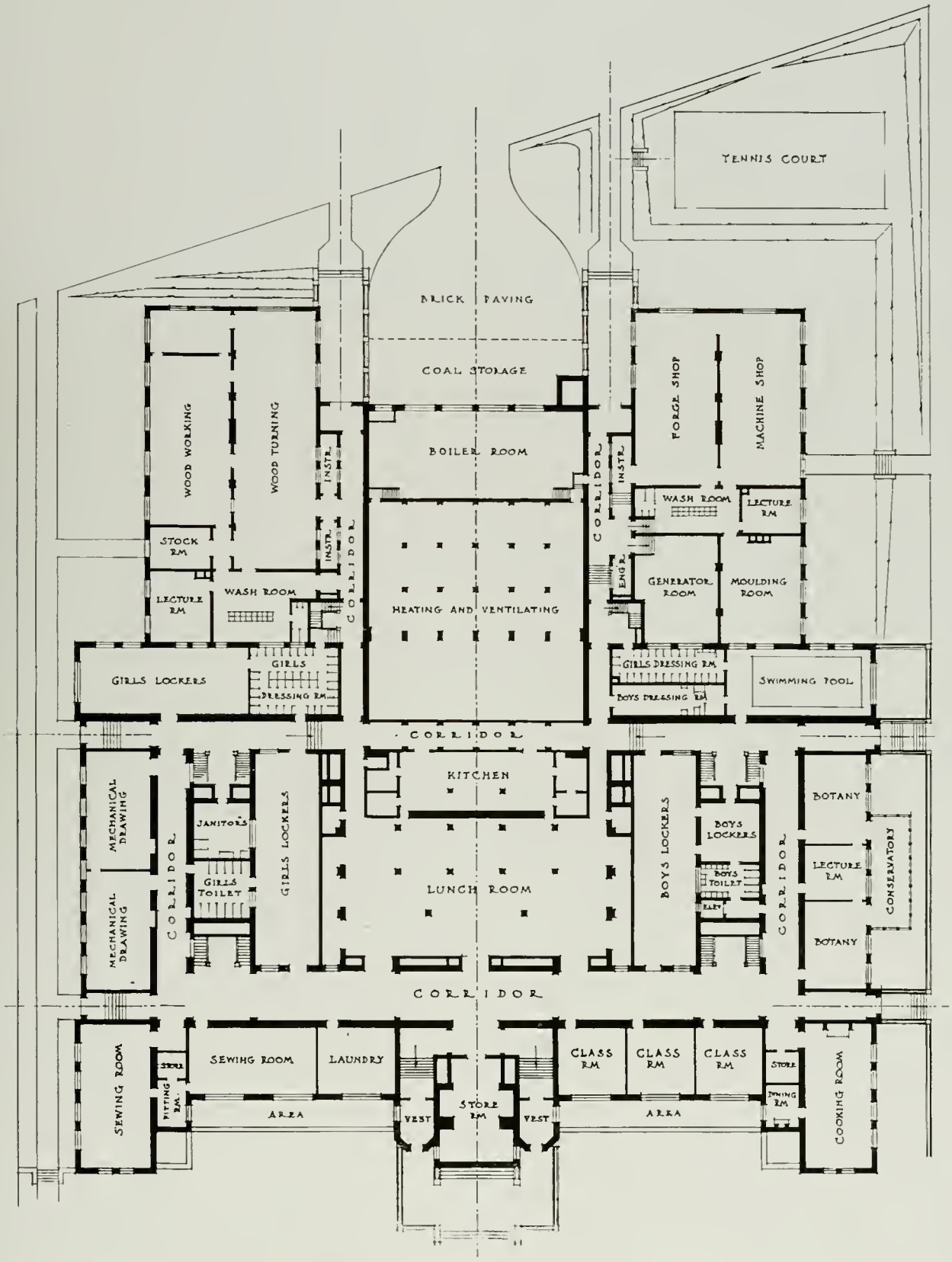
School architecture has become a specialty and many successful architects who have designed hand-

GYMNASIUMS, GROVER CLEVELAND HIGH SCHOOL, ST. LOUIS, MO.
WM B ITTNER, ARCHITECT

some residences, substantial business blocks or beautiful churches, may be quite ignorant of the special problems of arrangement, lighting, heating and ventilating with which the school architect is confronted.

I would say then to school boards, do not for a minute consider any architect who has not made a special study of school architecture. We might go further and limit the choice to those who have actually designed and constructed school buildings. It is perhaps not wise to advocate such an extreme, for if this rule were always followed there would, of course, be no chance for the young architect to enter this branch of the profession except by forming a partnership with a successful school architect.

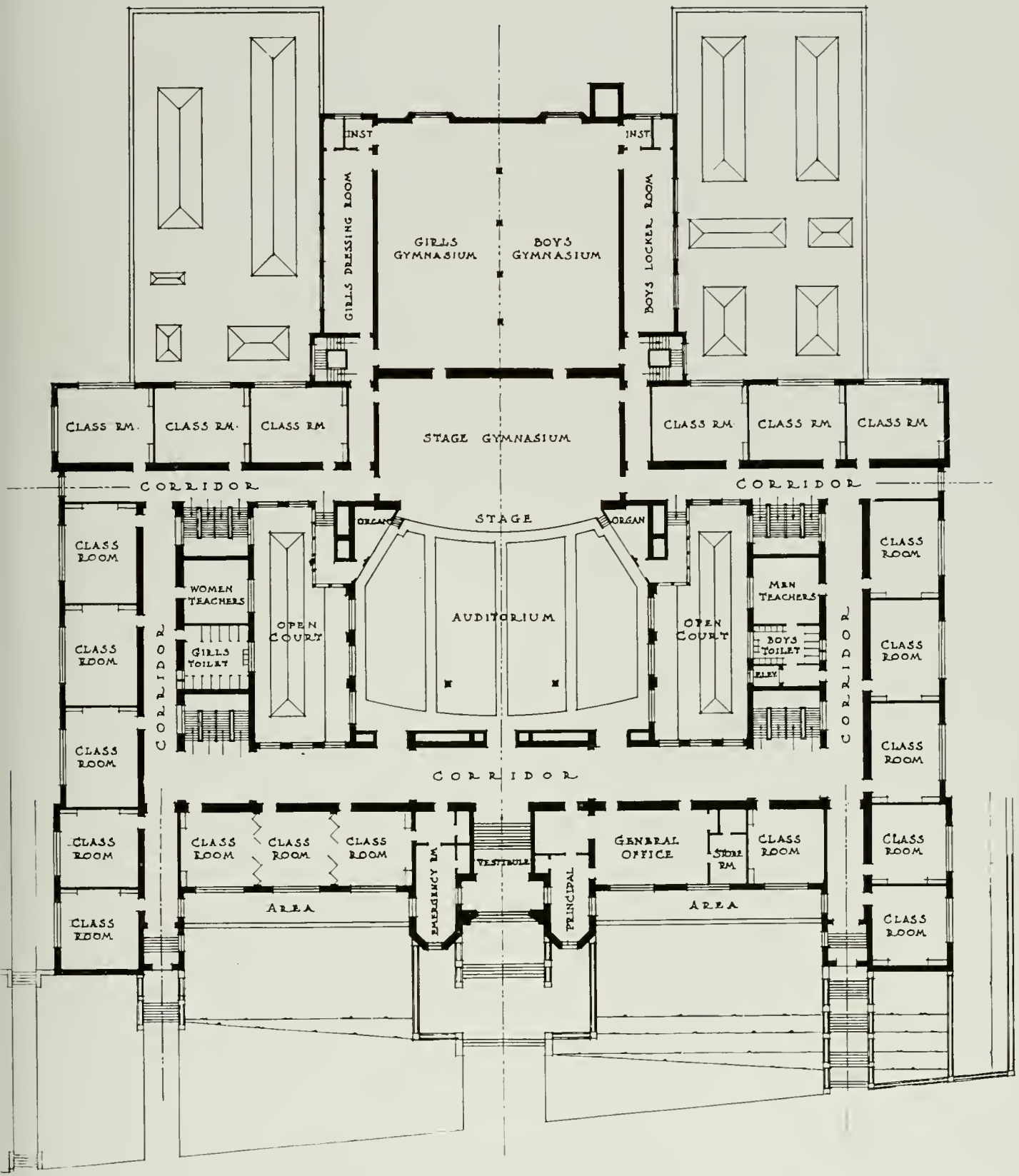
After the choice has been limited in the way just mentioned, there will perhaps be half a dozen archi-



GROUND FLOOR PLAN

GROVER CLEVELAND HIGH SCHOOL, ST LOUIS, MO.

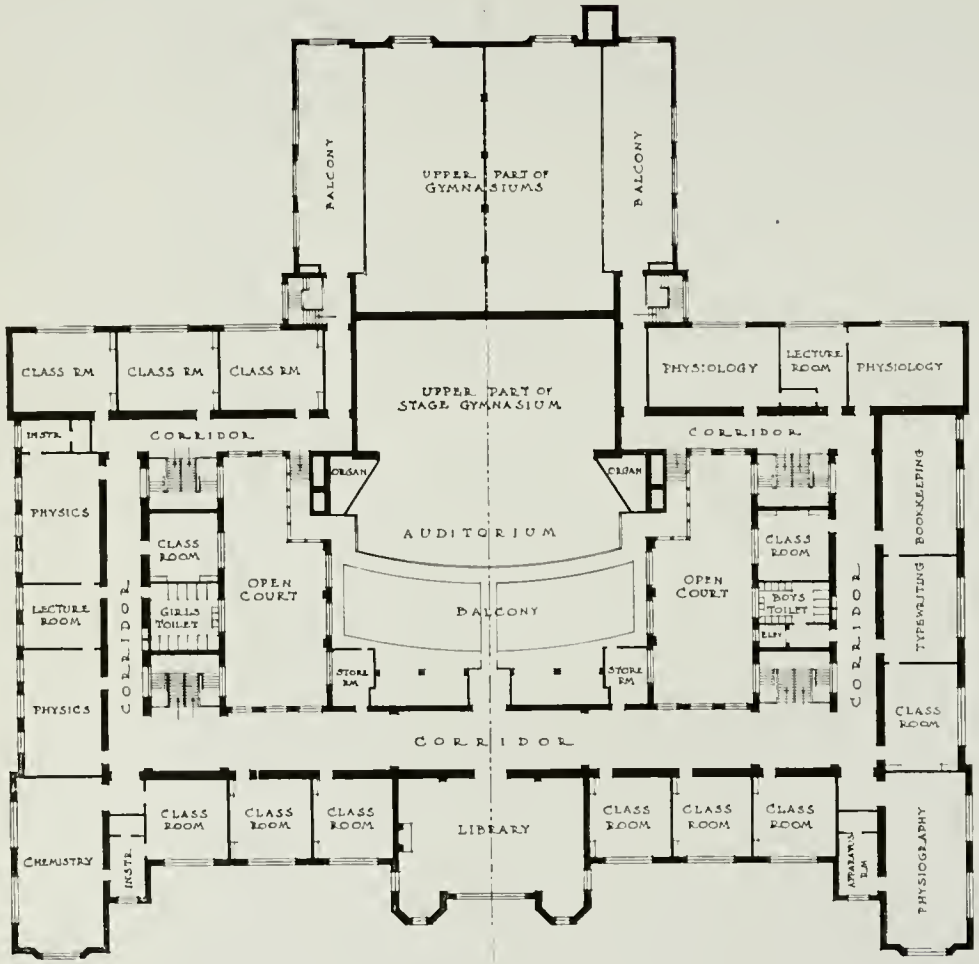
WM B ITTNER ARCHITECT



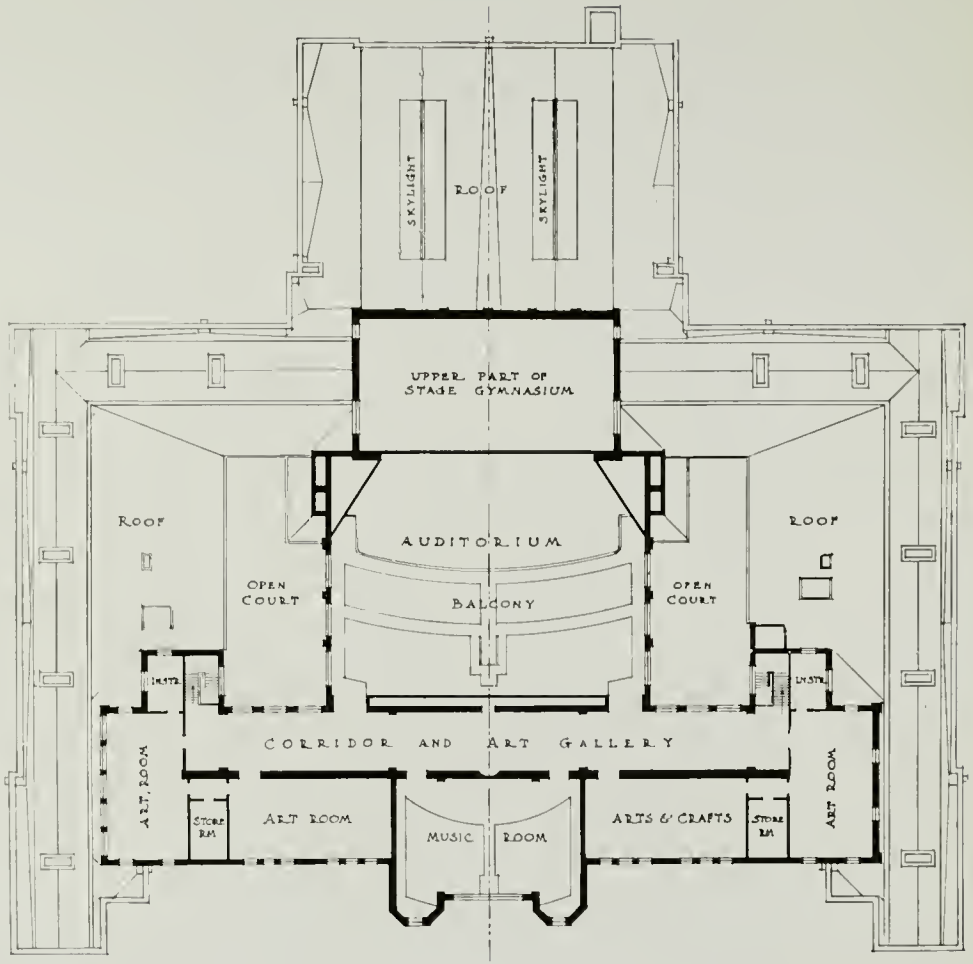
FIRST FLOOR PLAN

GROVER CLEVELAND HIGH SCHOOL, ST. LOUIS, MO.

WM B ITTNER, ARCHITECT



SECOND FLOOR PLAN



THIRD FLOOR PLAN

GROVER CLEVELAND HIGH SCHOOL, ST. LOUIS, MO.
WM. B ITTNER, ARCHITECT

OWENSMOUTH HIGH SCHOOL, LOS ANGELES, CAL.
HENRY HARWOOD HEWITT, ARCHITECT

GENERAL VIEW, OPEN AIR AUDITORIUM, OWENSMOUTH HIGH SCHOOL, LOS ANGELES
HENRY HARWOOD HEWITT ARCHITECT

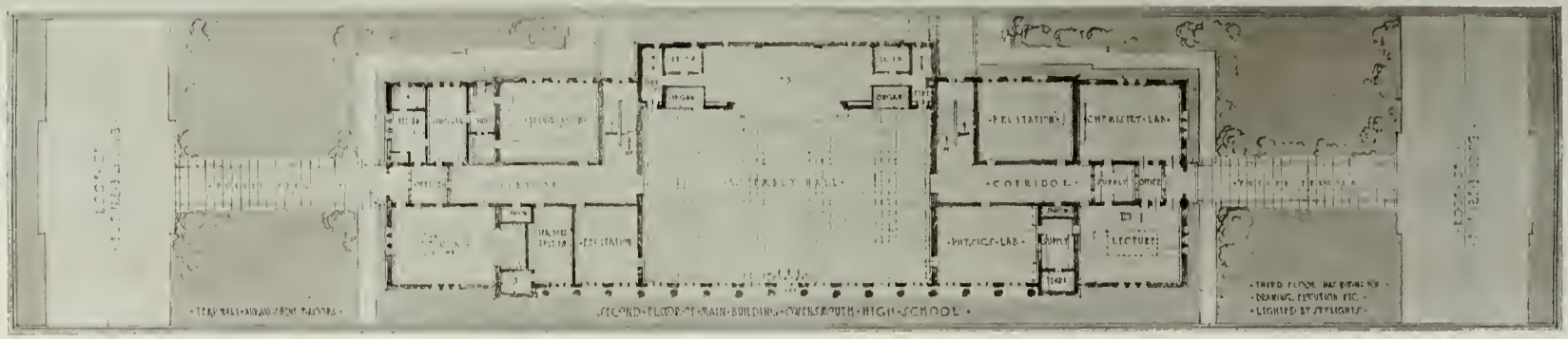
DETAIL, OPEN AIR AUDITORIUM, OWENSMOUTH HIGH SCHOOL, LOS ANGELES
HENRY HARWOOD HEWITT ARCHITECT

LOOKING ACROSS THE PIT. OPEN AIR AUDITORIUM

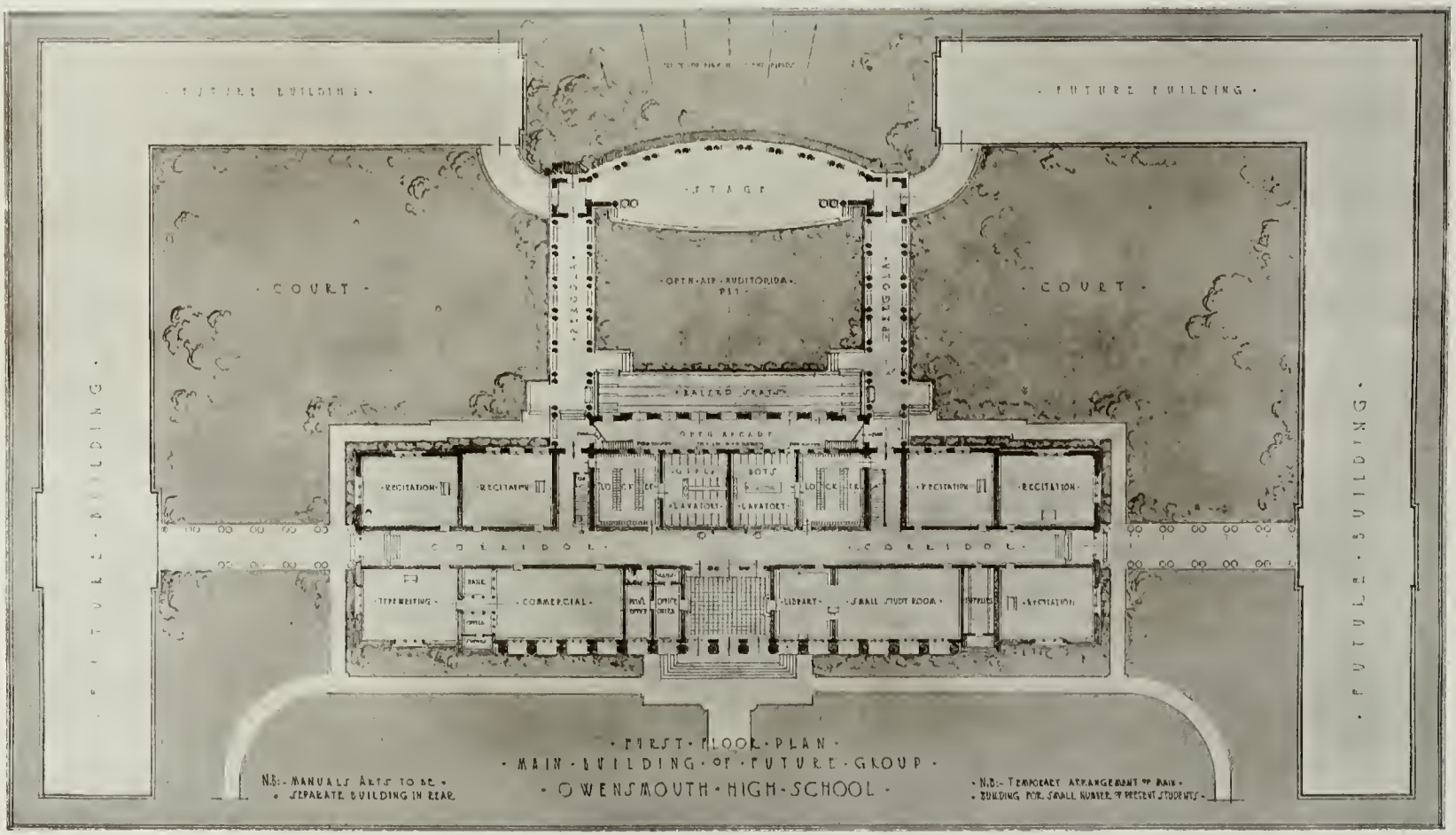
ONE OF THE PERGOLAS. OPEN AIR AUDITORIUM

OWENSMOUTH HIGH SCHOOL. LOS ANGELES

HENRY HARWOOD HEWITT. ARCHITECT


SECOND FLOOR PLAN OF MAIN BUILDING OF FUTURE GROUP OWENSMOUTH HIGH SCHOOL
ASSEMBLY HALL
CORRIDOR
PHYSICS LAB
LECTURES
CHEMISTRY LAB
TEAR WALL ARRANGEMENT FACTORS
THIRD FLOOR HAS DRAWING, EXECUTION ETC. LIGHTED BY SKYLIGHTS

SECOND FLOOR PLAN

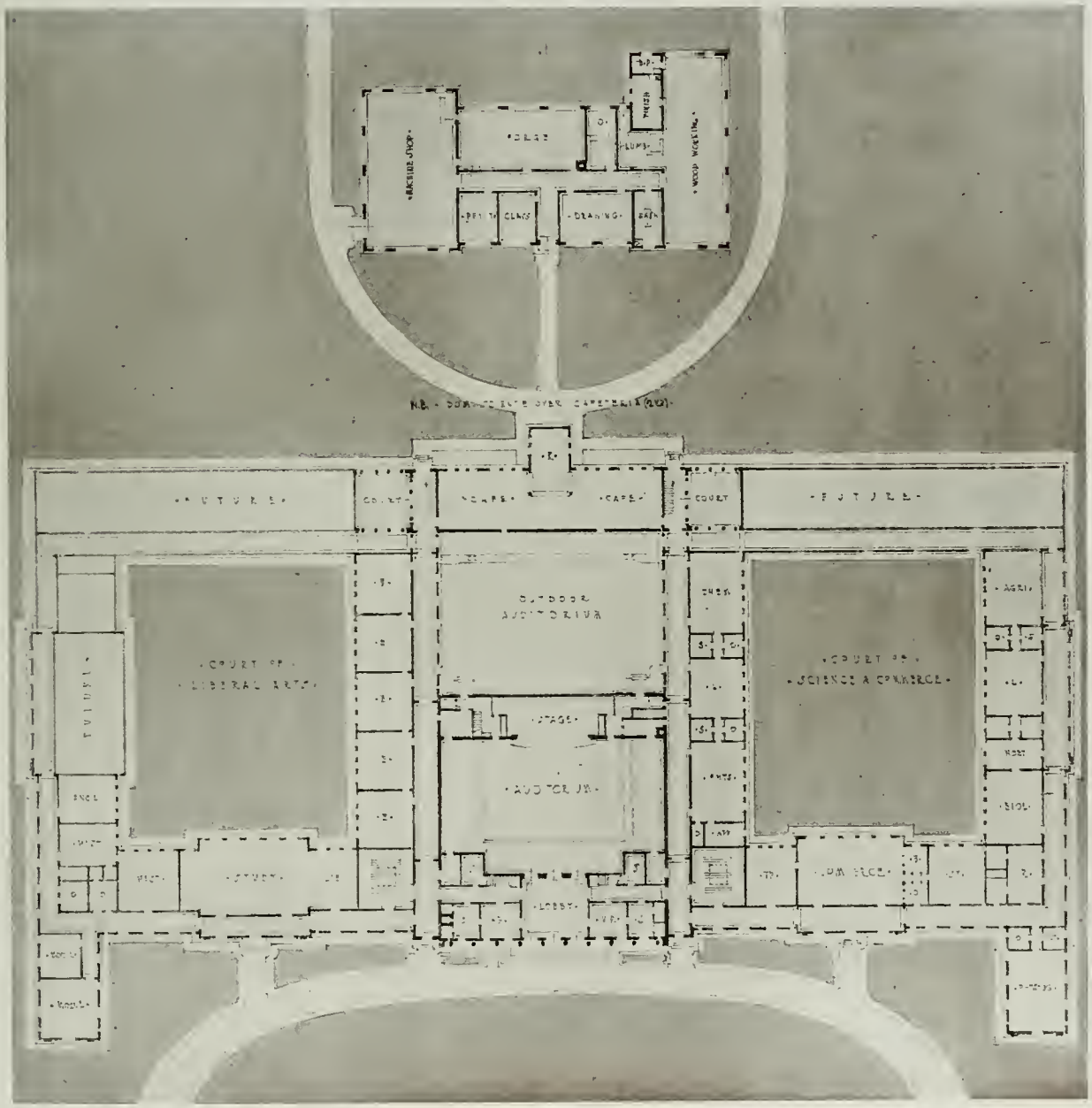


FIRST FLOOR PLAN

MAIN BUILDING OF FUTURE GROUP, OWENSMOUTH HIGH SCHOOL, LOS ANGELES

HENRY HARWOOD HEWITT, ARCHITECT

FRONT ELEVATION



MODESTO HIGH SCHOOL, MODESTO, CAL.

DeREMER & HEWITT ARCHITECTS

SOUTH COURT OF MAIN BUILDING

FRONT ELEVATION MAIN BUILDING

BENJAMIN FRANKLIN HIGH SCHOOL, PORTLAND, ORE.

F. A. NARAMORE, ARCHITECT

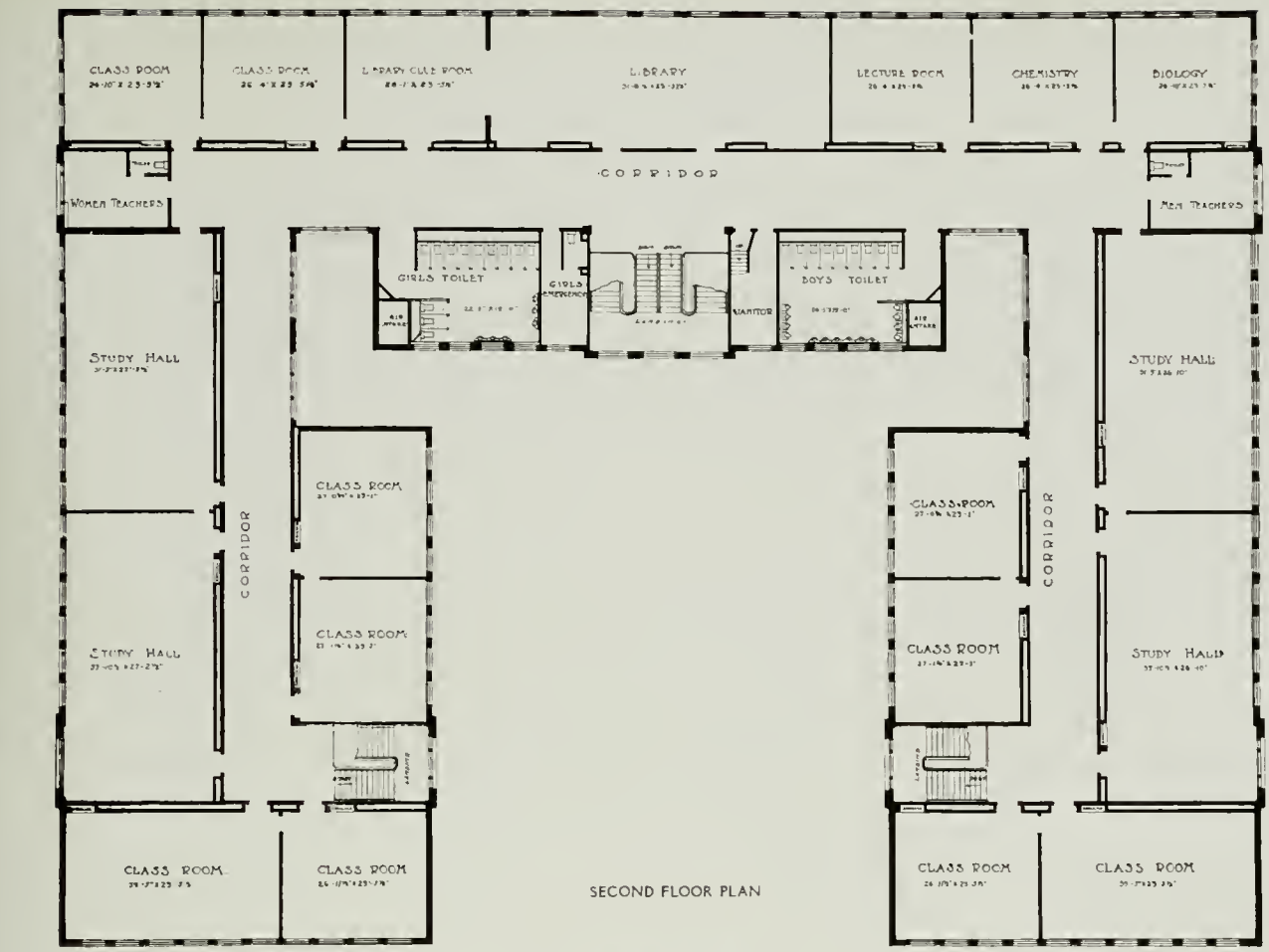
MAIN AND GYMNASIUM BUILDINGS

GYMNASIUM

BENJAMIN FRANKLIN HIGH SCHOOL, PORTLAND, ORE.

F. A. NARAMORE, ARCHITECT

THE ARCHITECT


CLASS ROOM
CLASS ROOM
LIBRARY REFERENCE ROOM
LIBRARY
LECTURE ROOM
CHEMISTRY
BIOLOGY
CORRIDOR
WOMEN TEACHERS
MEN TEACHERS
GIRLS TOILET
GIRLS
BOYS TOILET
JANITOR
STUDY HALL
CLASS ROOM
CORRIDOR
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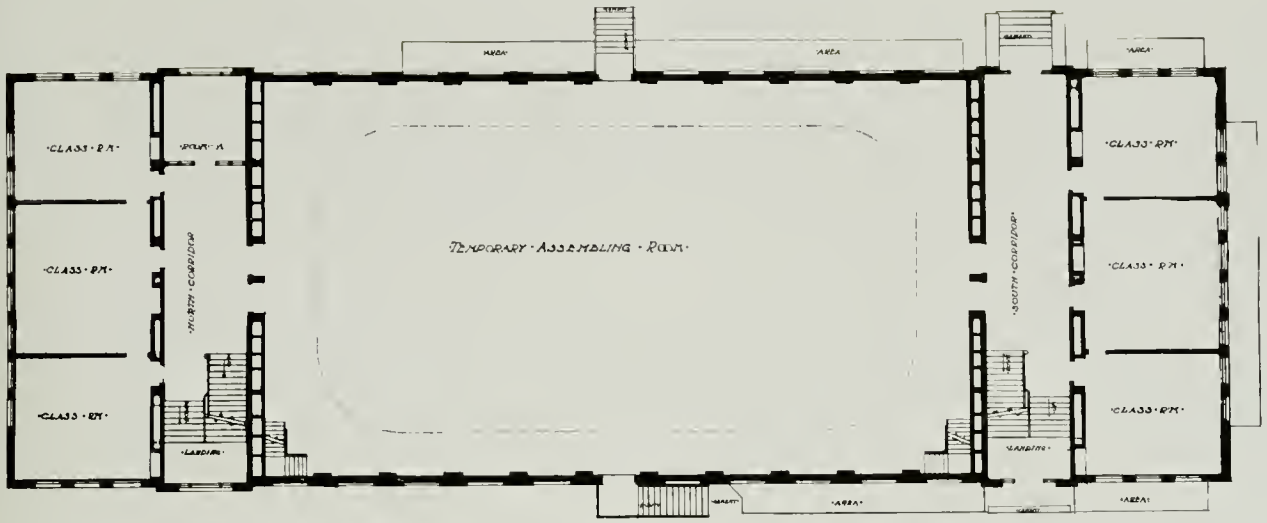
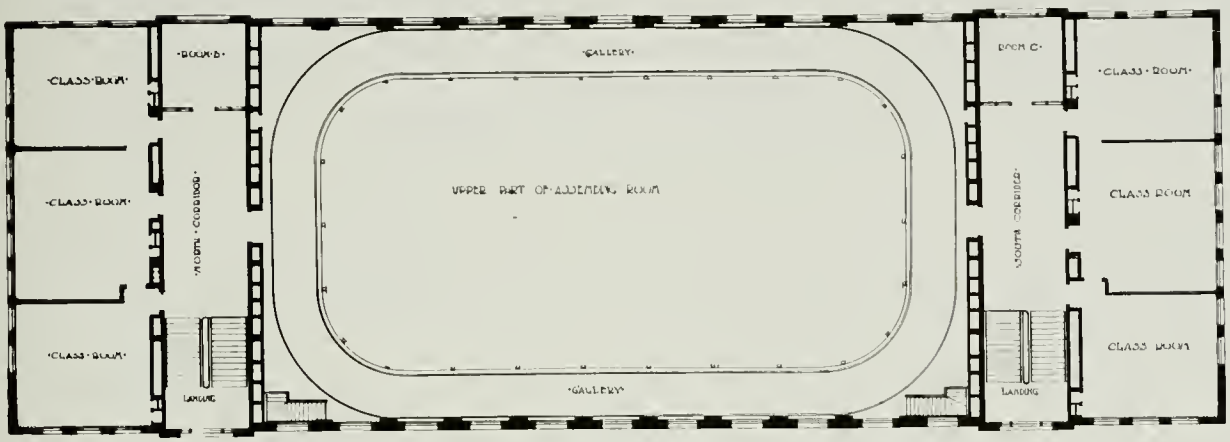
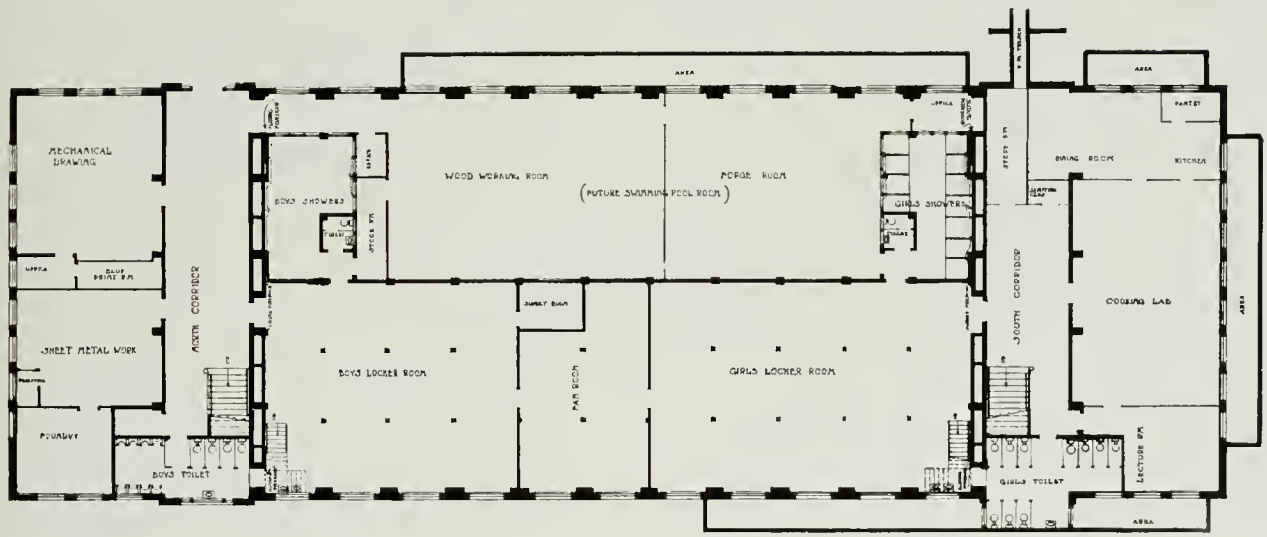
CLASS ROOM
CLASS ROOM
CLASS ROOM



FIRST FLOOR PLAN



SECOND FLOOR PLAN



BASEMENT PLAN

MANUAL ARTS BUILDING, BENJAMIN FRANKLIN HIGH SCHOOL, PORTLAND, ORE.

F. A. NARAMORE, ARCHITECT

EDISON SCHOOL

FACADE

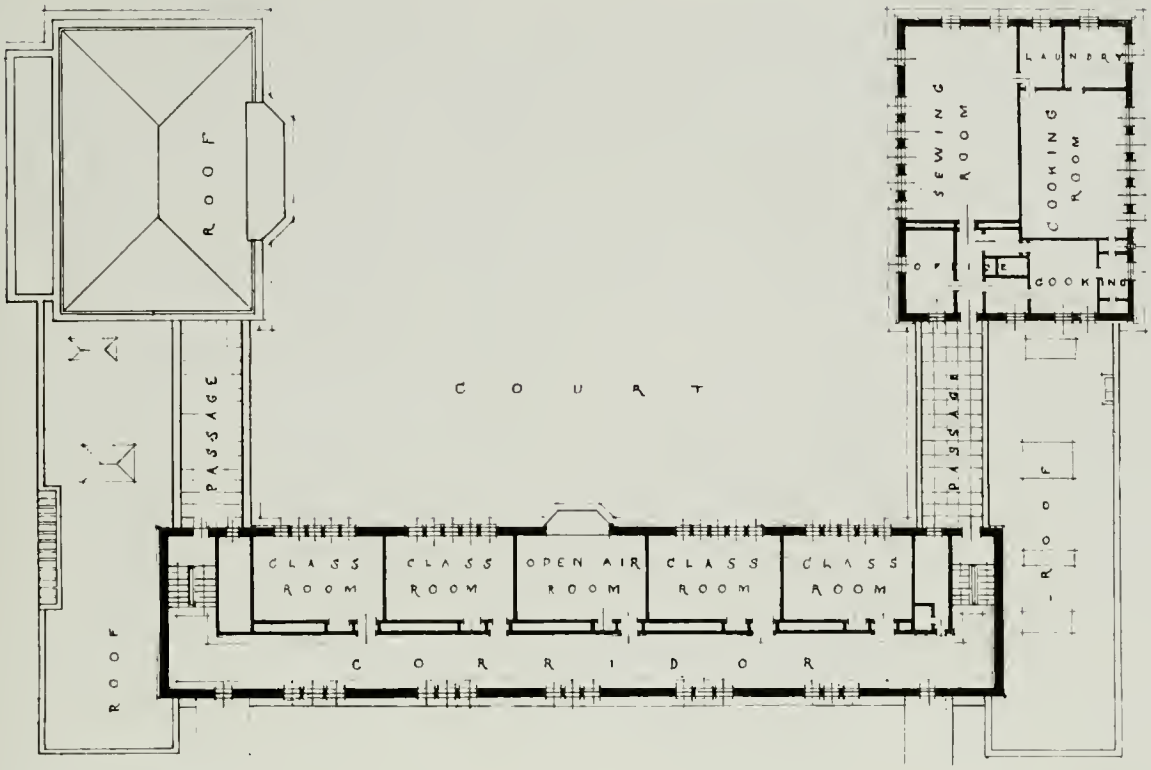
EDISON SCHOOL, BERKELEY, CAL.

W H RATCLIFF, JR., ARCHITECT

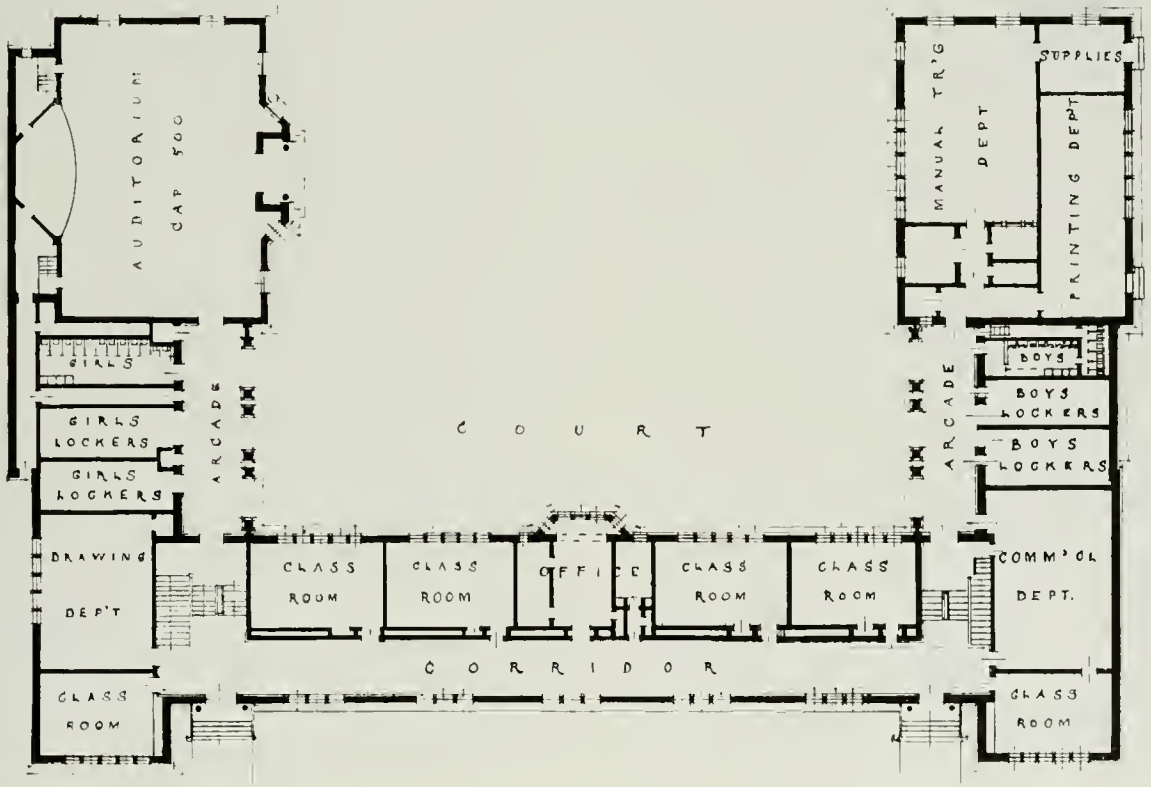
ENTRANCE DETAIL

DETAIL

EDISON SCHOOL, BERKELEY, CAL.
W H RATCLIFF, JR ARCHITECT



SECOND FLOOR PLAN



FIRST FLOOR PLAN

EDISON SCHOOL, BERKELEY, CAL.

W H RATCLIFF, JR., ARCHITECT

tects from whom to make the choice. What then is to be the next step in the process of elimination?

The only scientific way to proceed is to make an intensive study of the work of each architect and of the men themselves. If possible, the trustees should visit and inspect school buildings designed by each of the men and interview, either personally or by letter, other trustees who have had dealings with them. After all of these data have been gathered, it will be possible to construct a "score" sheet for each architect and in that way arrive at a decision.

A Corner of the Library, Owensmouth High School, Los Angeles
HENRY HARWOOD HEWITT, Architect

As items on this score sheet, the following may be suggested: Training, practical experience, artistic ability, study of school problems, employment of experts by the architect (electrical engineers, heating and ventilating engineers, etc.), co-operation with board, co-operation with contractor, availability, personality, integrity, reputation, utility in design, economy in construction, plans and specifications.

Much might be written concerning some of these points, but I will refer to only one, the last. When the Palo Alto Union High School Board had before it the task of selecting an architect, each of the three from whom the final choice was made, was asked to submit complete plans and specifications of some school designed by him and actually constructed. These plans were studied very carefully by the members of the board, and also by a commission of three consisting of two contractors and an engineer. This commission was asked to report to the board the results of its investigation. To the layman all plans are much alike, but there really may be great differences in them. Some plans are so drawn that the contractor may often be in doubt as to just what is meant and may have to spend a great amount of time finding the particular information he is looking for. It is possible, however, to draw plans in such a way that there can be no question as to what is meant, and to so index them that all details and information may be readily found. Specifications also may be too brief and, therefore, inaccurate, indefinite and insufficient. On the other hand, specifications may be too long, profuse, wordy and, therefore, also indefinite and unsatisfactory.

The space allotted me by the editor has already been more than used, so I will close with the hope that these few suggestions, from one who has been through the mill twice, may be of some small service to school boards confronted with the very important problem of selecting an architect for their new building.

Typical Girls' Toilet Room, Benjamin Franklin High School, Portland, Ore.
F. A. NARAMORE, Architect

Typical Study Room, Benjamin Franklin High School, Portland, Ore.
F. A. NARAMORE, Architect

COOKING ROOM, GROVER CLEVELAND HIGH SCHOOL
WM. B ITTNER, Architect

School Architects and Their Relation to Boards of Education

By O. M. PLUMMER*

FOUR years ago when I came on the Board of Education, my only experience, so far as having to do with construction and buildings, was in our rough stock yards work and in my two experiences at home buildings. Out of my experience in the building of a home I was given a very good idea of what the architects must be up against. I had what was supposed to be a "perfectly good," responsible contractor—he admitted it himself—and I am a great hand to believe that everybody is fair until I find out otherwise. I lived on that job day and night for about six months (the house was to have been finished in 120 days). Almost as fast as the carpenters could put up a piece of work I could get it torn down. The man spent dollars and dollars, fiendishly, it seemed to me, trying to do the wrong thing. Everything must come to an end, so finally I had my house—after a fashion—a good, strong, serviceable building. With this experience staring me in the face, you can imagine I sympathized pretty keenly with our Architect and Superintendent of Properties in his daily battles with the numerous contractors. I was fully aware of the fact that I knew practically nothing about construction. I thought I knew we had a capable, honest man as architect and one who would hew to the line, letting the chips fall somewhere. I also thought that he had under him high-class inspectors. This opinion was borne out by re-

LAUNDRY, GROVER CLEVELAND HIGH SCHOOL
WM B ITTNER, Architect

*President School Administration Department National Educational Association, Member Board of Education, Portland, Ore

ports brought to me by dissatisfied contractors, who were all the time complaining that the architect and his assistants were too severe; that they wanted something too good; that they would not allow them to substitute "something just as good"; that the taxpayers were paying too much money for their buildings on account of their severe specifications. Contractors threatened to quit their work on account of severity of inspection, but they never did. All of this proved to me that our people were paying strict attention to their business. It is true I try to confer with our architect in matters of complaints, just to see if, perchance, he overlooked anything. As a rule I insisted upon the contractor going with me before the architect, in case he wanted to make any prolonged complaint. Very few of them cared to go.

CHEMISTRY LABORATORY, GROVER CLEVELAND HIGH SCHOOL
WM B ITTNER, Architect

It seems a very peculiar thing to me that a contractor will bid on a piece of work on which the specifications and blue prints are unusually full, when he knows from past experience and is told by the Board of Education and the architect that he will be expected to live up to all the rules and specifications to the letter, and then think that he is going to be able to do the job in his own way, with his own material and practically his own specifications, and get away with it.

Two years ago at the session of the Legislature, a committee of contractors came before the Ways and Means Committee trying to have a law passed, giving local contractors certain privileges. They testified before that committee that the architect of our district was getting $1.10 worth of buildings for every $1.00 paid them. Their idea apparently was that we should get six bits' worth of work for every $1.00 paid out. I told the committee that this was about the best bit of testimony I had ever heard.

PHYSICS LABORATORY, GROVER CLEVELAND HIGH SCHOOL
WM B ITTNER, Architect

It seems to me that the position of an architect is

very similar to that of superintendents of schools along construction lines. We back our Superintendent of Schools in his selection of teachers and in his course of study, and everything having to do with the educational end of the business; therefore the same attitude should exist as regarding the architect's position. He is a man who has given years of study to the proposition and one who deals particularly in schoolhouse construction.

AUDITORIUM, GROVER CLEVELAND HIGH SCHOOL
WM B ITTNER, Architect

He has before him at all times the best that has been accomplished in other cities. My observation has been that school architects are very glad to "swap" ideas. He tries in each school to give it a personality and not erect over the entire city schools of exactly the same outward appearance.

The Board's duties, it seems to me, pretty largely end when they have secured the grounds and decided about the number of children they wish to house in a particular building. The superintendent of schools, the architect and the principals then confer and try to frame up floor plans which will handle the work to the best advantage, after which the architect tries to clothe it in something which will be pleasing to the eye. It is barely possible that the architect is sometimes too expensive in his tastes, that he wants to construct too well. Experience with old wooden buildings, put up during an era of cheap construction, when school systems were considered "easy money," makes of me an advocate of the best it is possible to get in the way of construction.

The leader of one of our labor organizations called me not long ago and stated that in his opinion, no city in the United States was getting, or could get, better construction than that done here in Portland under our present architect.

MUSIC ROOM, GROVER CLEVELAND HIGH SCHOOL
WM. B. ITTNER, Architect

It is true that building committees and boards of education usually go over with the architect pretty thoroughly the plans for new school buildings, more, I think, for their own personal satisfaction than from any idea that they can add much to the already com-

CONSERVATORY, GROVER CLEVELAND HIGH SCHOOL
WM B ITTNER, Architect

prehensive outline. After the bids are awarded and contracts are made, the board member's biggest duty is to back up the architect in seeing that plans and specifications are carried out.

Not always should contracts be awarded to the lowest bidder. Experience has shown us that it is unwise to give a second contract to a man who has been a thorn in the flesh during the construction of a previous job. I remember well a man who had just finished up a $175,000 building, with whom the architect had scrapped religiously for the eight or ten months of its construction. He was always wanting to do something different, but "just as good." He would use material that he was told not to use and be mortally offended when he was compelled along at the end of the contract to replace it. This man had the lowest bid on another $175,000 job within three months after finishing the first job. We turned him down flat and he nearly had apoplexy, but it did him no good. This experience taught him a good lesson, however, for about a year after when we awarded him a contract on a small school he did fairly good work.

I remember a painter who came before the Board at one time and told of the poor work some other contractor had done on the building. He was apologizing for his profession. Afterwards on a small contract we gave him, we discovered he was using 50 per cent earth in his paint. This man gets no further contracts regardless of his bid. We had another man who was always bidding upon specifications of his own, stating that his plans were much better than the architect's. We eliminated this gentleman for a couple of years and he is now in line.

Nothing quite so quickly takes the heart out of an architect as to have a contractor discover that he can go to a member of the Board and override the superintendent's orders, and it should never be done. If any very vital changes need to be made for any reason, there should be a joint consultation and the con-

LIBRARY, GROVER CLEVELAND HIGH SCHOOL
WM B ITTNER, Architect

tractor should feel that it came as a recommendation of the superintendent's and not from the Board. Building committees like to feel that they have complete specifications and plans and that there will be very little extra change work entailed.

Those of us who have built small homes know of the great number of changes we make in our own plans, even in these small constructions, and therefore realize the impossibility of putting up a building, costing from two hundred thousand dollars to half a million without having a considerable number of changes during the course of construction. The architect should feel that he can always go to his building committee and point out where he could make a change to advantage and to feel that they will authorize the change. It would be a very bad thing indeed if a superintendent was so held to his specifications and blue prints as to compel him to put in something that he had discovered to be out of line. Apparently no building committee should expect a building to be complete within the time limit. I think it is safe to say that this is usually exceeded by at least fifty per cent. There are so many conditions of weather and material delays, labor questions, that it is almost out of the question to complete a structure in the given number of days. Seems to me to be very unwise to attempt to rush construction for any particular opening, for the reason that contractors are more or less inclined to ease up on the class of their work and it is almost necessary to let it pass. A few years under a good, honest, consistent superintendent of properties is a liberal education to the average general contractor. He discovers after a few sad experiences exactly what is expected of him and he does it the first time without any attempt at evasion. We presume that the majority of contractors are good, honest citizens at heart, but they have been led to look upon school work as something different from ordinary industrial work. They have felt that there were strings that might be pulled, politics that might be worked. The city that has grown out from under that feeling has advanced a long way along the right lines.

The architect who can hold down a school job through several administrations is a man who can usually go out in private life and do much better for himself. In many cases it is loyalty and pleasure in the school work which make it possible for him to undergo the strain of injustice, criticism and abuse which are heaped upon him. His reward comes perhaps years afterwards when his well-constructed buildings become the show places of the city and the visitors are shown the beauty of architecture, their wearing qualities and other commendable features. No class of architecture, apparently, presents more problems than that of school work, and it seems that school boards should insist on such architects handling their business and not expect to get so good a result from a man who deals in general construction. School house problems are entirely different from those which confront the ordinary architect. It is a study of years and years, and never ends. The most hopeful sign of recent years is the appointing of a committee of architects under Frank Irving Cooper, of Boston, to prepare a program of school-house standardization to be given as a part of the school administration department of the National Educational Association. An ultimate aim of this committee will be to bring together all of the best usages regarding

LUNCH ROOM, GROVER CLEVELAND HIGH SCHOOL
WM. B. ITTNER, ARCHITECT

(Continued on page 200)

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THE ARCHITECT

VOL. XIV. SAN FRANCISCO, SEPTEMBER, 1917 NO. 3

Editorial.

THE editors take pleasure in announcing four School House issues of THE ARCHITECT, of which this one is the first. The others, coming out in October, December and February next, will cover this important subject in considerable detail, giving special attention to the general needs, the best methods of achieving them and specific examples of recent achievements in the Western States.

The importance of this subject of schools is hardly possible to over-emphasize at this time. The world conflagration going on has driven and is driving every nation concerned in the war to the conclusion that never before in the world's more recent history has education been more vitally needed, on the one hand, or more seriously menaced, on the other. What with the great exodus from high schools and colleges of thousands of students going into the service of their country, the increased difficulty experienced by parents in keeping the younger ones in school because of the increases in living expenses, the added costs of building operations tending to discourage them and the very subtle and universal tendency among the taxpayers in these changeable times toward letting down on everything but the actual prosecution of the war, this importance is easily lost from sight. But, in each country, those most widely awake to the future have perceived and stood for continued efforts in progressive schooling and school building in order to insure the nations against the losses among the educated youth due to the tolls of war.

There has been an impetus given in England and France, notably, as there will be here in our country, to vocational and specialized training because of the widespread demand for this preparedness as a means of national preservation. Each citizen has been asking himself the questions: "What am I fitted to do in this emergency? What am I trained for?" The result has been a gain in insight into the need for schooling now and in the future and the need to keep alive a special effort to make it possible. So THE ARCHITECT would emphasize the fact that proper sites, buildings and equipment were never more essential and that a community can show patriotism of the highest order by maintaining and extending, along right lines, its school system at this time. It is conservation of the most fundamental assets of the people—the mental and physical welfare of the rising generation, which is to take up the task of reconstruction. Once this necessity is realized, the same spirit for co-operative effort will be spread abroad that has already done wonders in other ways for conservation. Those students who are left in school will be stimulated with a desire to continue to the higher grades and economic opposition and listlessness on the issue will be overcome. It will be realized that the relatively high cost of building is with us for some years to come and that as adjustments are made all through society to meet these new conditions of labor and materials, there will be no reason for delay in these important building programs.

The usefulness of the school is not by any means confined to the solution of pupils' problems. It is to be noted with increasing frequence that preparations are such as to make the building a real neighborhood or community center. This is seen in the inclusion of a large auditorium with provision for music, lectures and moving pictures; of public playgrounds to be used by all after school hours; of neighborhood club rooms; of night classes of all grades, etc. All these expansions tend to make the building usable during longer hours and for more people—a tendency which, if followed to its conclusion, would make the investment pay better returns and somewhat offset the high cost of materials.

The great increase in factory building, especially in the West, will bring about considerable shift in population. New schools must follow, and such admirably equipped high schools as the Grover Cleveland, in St. Louis, Mo., as shown in this issue, must be an inspiring example. The architect, Mr. Wm. B. Ittner, F. A. I. A., a well-qualified expert, has provided many valuable photographs of the special rooms, which are more and more significant of the real worth of such buildings. Together with his detailed description, they give data that should interest many.

Mr. Sidney D. Townley, in his article, "Selecting an Architect for School Work," and Mr. O. N. Plummer, in "School Architects and Their Relation to Boards of Education," both speaking from actual experience, give invaluable advice regarding the procedure of achieving results which, if followed, would eliminate much confusion, cost and regret in school building.

With all the striving after efficiency let us not get our thought away from the need of having real architectural expression. Good architecture pays. It is worth while as an investment in city beautification; it has its good effect on the passerby and occupant alike; it outlives the poorer design in popularity and never goes "out of style." The child should have an environment as carefully studied as possible, so that the very building in which he passes his most impressionable hours shall contribute to his understanding of good taste, proportion, good color, freedom, and propriety in all ways. This does not mean that luxury or extravagance need be expressed, but good design and construction. It helps the student by increasing his enthusiasm for his school and those who maintain it. It helps him later, as a taxpayer, to do his part if his memories of school are pleasant and he can see actual results from his expenditure.

This correct expression of the school building naturally differs in different environments and climates. Even in the West there is a wide difference between the program for Seattle and Los Angeles or San Francisco and St. Louis. So it will be interesting in our coming School House issues to study them for types. There is the one-floor type with open corridors so highly desirable in the warmer sections where land is available, and the group type, with its advantages, as well as the more usual but highly desirable ones so well portrayed by the Edison School, designed by Mr. Walter Ratcliff, Jr., architect of Berkeley. Combining some of the best features of these types is the Owensmouth High School, Henry Harwood Hewitt, architect, also illustrated in this issue, in such a way as to accent its most progressive feature, —a large outdoor auditorium.

It is works like these shown that are more and more expected of our Western architects with their greater freedom from binding precedent and with the eyes of the country turned upon us, it behooves us to all co-operate in maintaining our high standards in school building.

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Southern California Chapter, 1894—President, J. E. Allison, 1405 Hibernian Building, Los Angeles, Cal. Secretary, A. R. Walker, 1402 Hibernian Building, Los Angeles, Cal. Chairman of Committee on Information, W. C. Pennell, Wright & Callender Building, Los Angeles. Date of Meetings, second Tuesday; except July and August at Los Angeles.

Oregon Chapter, 1911—President, Joseph Jacobberger, Board of Trade Building, Portland, Ore. Secretary, W. C. Knighton, 307-309 Tilford Building, Portland, Ore. Chairman of Committee on Public Information, Joseph Jacobberber. Date of Meetings, third Thursday of every month at Portland; Annual, October.

Washington State Chapter, 1894—President, Charles H. Bebb, Seattle. First Vice-President, Daniel R. Huntington, Seattle. Second Vice-President, George Gove, Tacoma. Third Vice-President, L. L. Rand, Spokane. Secretary, J. C. Coté, Seattle. Treasurer, Ellsworth P. Storey, Seattle. Counsels: J. H. Schack, J. Stephen and Charles H. Alden. Date of Meetings, first Wednesday, except July, August and September, at Seattle, except one in spring at Tacoma. Annual, November.

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School Architects and Their Relation to Boards of Education

(Continued from page 122)

school-house construction and to get more thoroughly in touch with one another. A board of education should insist upon their architect taking a business vacation of at least a month each year, visiting various school systems all over the United States. No other money which they might spend could be put to better use. The coming together of ten, fifteen or twenty of the leading school architects in the country for a trip of this kind, made in a body, would be very useful and I would like to see a program arranged, meetings to be held in connection with the National Education Convention.

I might say in closing that perhaps the largest duty of a school board consists in choosing wisely their architect and then working overtime in letting him alone. I feel confident that the architect who has been backed in all of his undertakings by his building committee, or even one member of it, must have a wonderfully soft spot in his heart for that man. There may be unjust architects and those who deliberately wish to work a hardship on the contractor—I don't know that kind.

Here's to the man who has put his best thought, the best that is in him, into beautiful structures, which are also models of efficiency. The public at large knows very little of him; his reward is in heaven, and he may be surprised to find a few contractors and some board members there.

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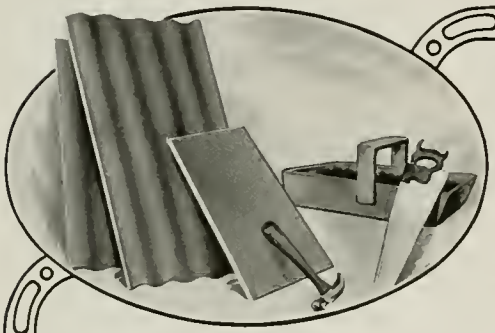

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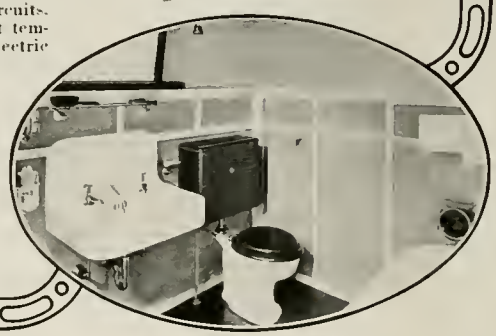

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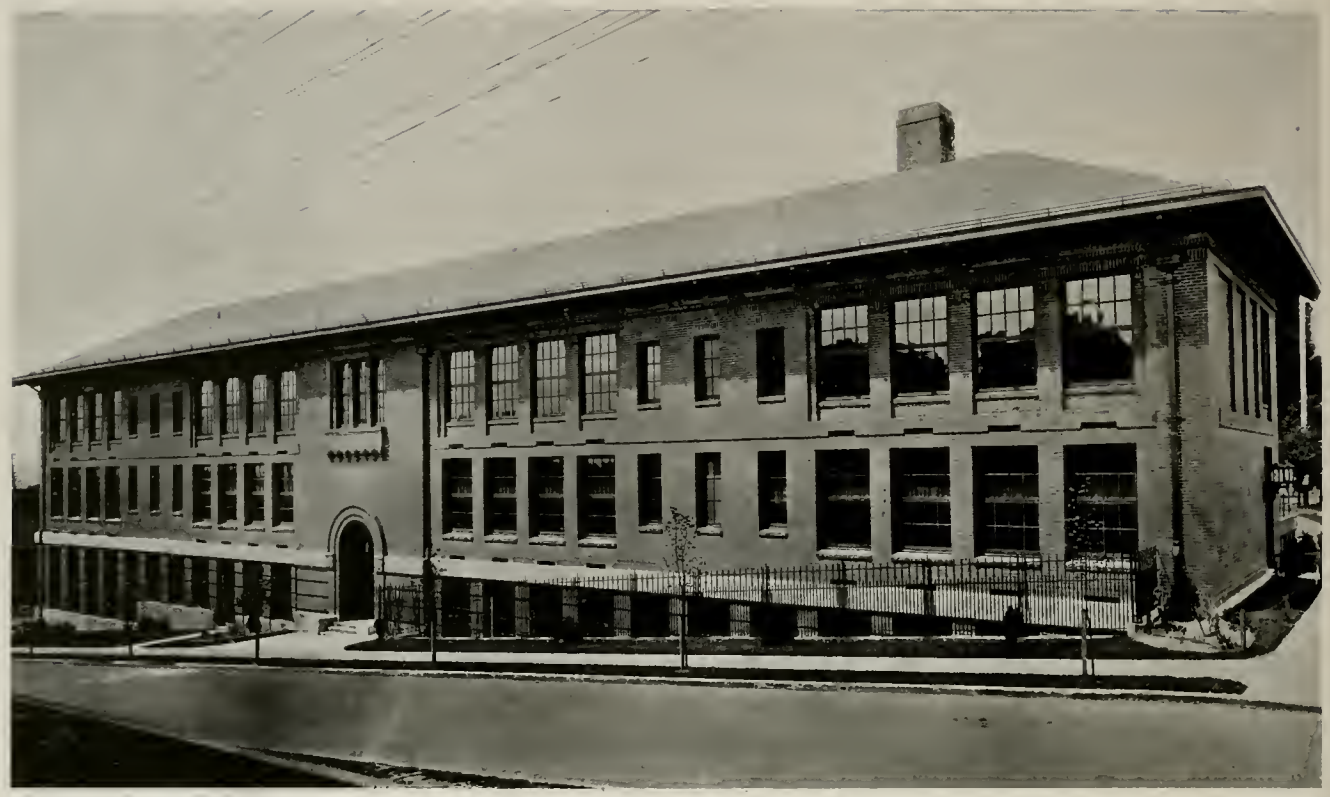

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The following editorial reprinted from August, 1917, issue of *The Fire Engineer*, may recall the experiences of several in the San Francisco fire of 1906:

THE WOODEN SHINGLE

In the leading article in this issue, Mr. F. C. Weber, ex-Secretary of the Board of Fire Engineers of Meadville, Pa., discusses the wooden shingle and its substitutes in a very interesting and informing manner.

In the opinion of the "Fire Engineer," any man who builds in a closely settled community and covers his roof with wooden shingles, can't be classed as a good citizen; for the thing he creates is a menace to the community, not a danger, but a menace, and it's a mighty poor community that hasn't gumption enough to destroy a menace.

The wooden shingle has one virtue in common with the paper napkin; it's cheap. Its first cost is low. The service of a paper napkin is very short, so is the service of the Wooden Shingle. Such shingles as we are getting now usually give about six to seven years of service, and in comparison with other roofing material, especially asbestos, as noted by Mr. Weber, the actual cost of Wooden Shingles is an exceedingly high one.

Our timber resources are growing smaller fast. Our mineral supplies are practically inexhaustible. If among these minerals there is one from which in combination we can manufacture shingles and lumber whose life service is not measured by one generation, which are non-inflammable, which are fire resistant, which will serve to keep our houses warm in winter and cool in summer, it would seem to be the part, not only of wisdom, but of plain ordinary every-day horse sense to utilize that mineral.

One of the effects of this war will be to wake us up to a realizing sense of the fact that we are a stupidly, wickedly and lazily wasteful people. It is going to teach us economy. It is going to teach us discipline. It is going to teach us to save what we have and to employ our resources far more effectively than we ever have employed them before. It is going to teach us to build right, of right material and in a disciplinarian sense it is going to show us how necessary it is for the common welfare that every man must be held personally responsible for his own misdeeds, whether they be of intention or ignorance.

The immense value of asbestos hasn't yet begun to be half realized. Steam fitters, boiler makers and users of steam have been utilizing it for years to keep the cold out and the heat in. In the summer time we want our houses cool; in winter, we want our houses warm. Why shouldn't owners, architects and contractors learn the lesson? The lesson is commended most earnestly in a larger way to the careful attention of Fire Prevention Engineers.

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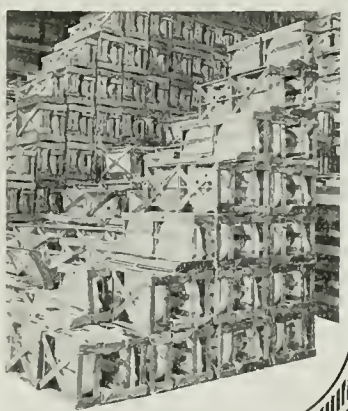

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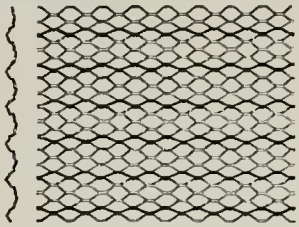

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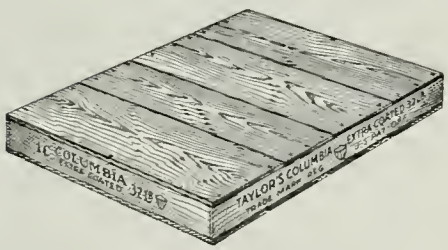

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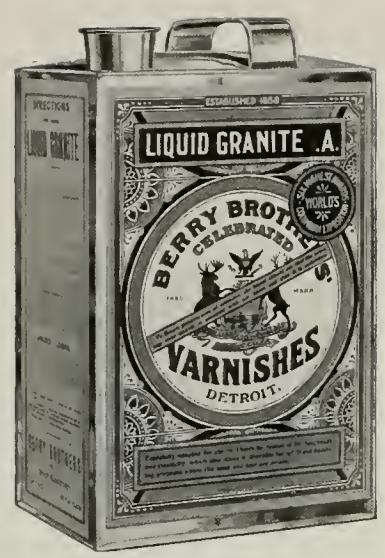

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Associate Editors for October, 1917
JOHN J DONOVAN . Oakland
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F A NARAMORE . Portland

HARRIS ALLEN
EDITOR

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¶ Published in the interest of the architectural profession, on the first of each month, at 245 Mission Street, San Francisco. Entered as second class matter August 4, 1911. Subscription price in the United States and possessions, $5.00 a year; foreign and Canadian, $6.00 a year. Single copies, 75 cents each.

¶ Changes in, or copy for new advertisements, must reach the office of publication not later than the fifteenth of the month preceding issue. Advertising rates and any other information will gladly be given on application.

¶ The editor will be pleased to consider contributions of interest to the profession. When payment for same is desired, this fact should be stated.

ANCIENT GATEWAY IN NORTHERN ITALY

THE ARCHITECT

VOL. XIV. SAN FRANCISCO, OCTOBER, 1917 NO. 4

STANFORD UNIVERSITY SCHOOL DISTRICT ELEMENTARY SCHOOL
JOHN J DONOVAN ARCHITECT

The Educational Function of School Architecture

By C. E. RUGH, Professor of Education University of California

THE greatest resources of the community, of the State, of the nation, are the children. They are the greatest assets, but they may become the greatest liabilities. All the gain in health and wealth, in art and science, in morals and religion, if saved at all, must be preserved and conserved through the children. They may waste all these gains. Not only so; most of the diseases, vices and crimes are perpetuated through the children. If the ranks of evil-doers were not recruited from children, most diseases, vices and crimes would die out in one short generation.

The process by which society conserves its gains is education. The formal organization of education is the school. The material means of the school is the school plant, consisting of the grounds, buildings and material equipment.

School architecture is often thought of as being concerned only with the buildings, but no trained architect so considers it. A real school architect is interested in the whole plant. He is interested in the grounds, the buildings, and the physical equipment, but this interest is subordinate and determined by the welfare of the children.

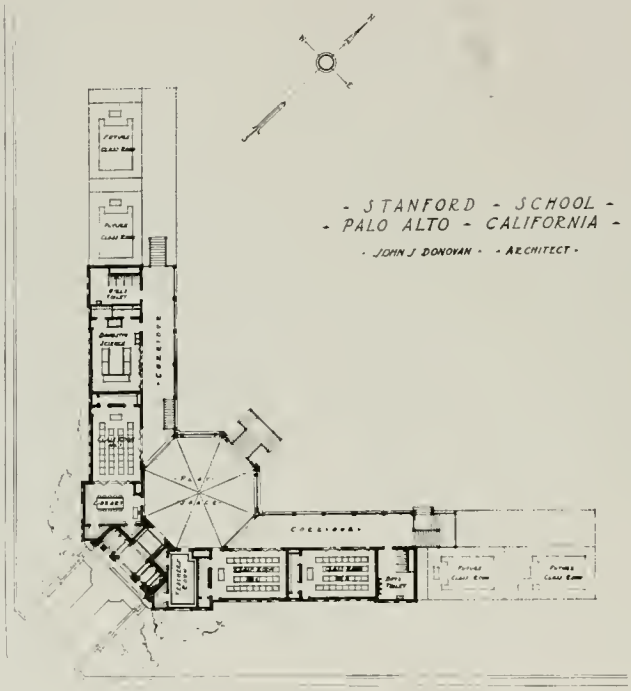
A school is the most general and most complex institution in the community. There are more lines of interest and influence centering in the school than in any other organization in the community. For this reason the purchase of a school site and erection and equipment of school buildings are of great importance and interest. The selfish persons and organizations of a community are moved to seek gratification of their greed or to seek special privileges. For these very same reasons the occasion for providing a community with adequate school facilities becomes an opportunity for educating the whole community in their rights and duties concerning education. This achievement can be accomplished, however, only by

FRONT ELEVATION

wise educational and civic leadership.

A school plant is an expression of public opinion. It expresses the community's interest, faith and intelligence concerning education. It may aid real architects and good citizens in combatting the machinations of selfish interests to point out what the school plant is not.

A *school building* is not a monument or memorial to the architect, contractor, board of education or supervisors. These persons are public servants. It is bad taste, to say the least, for these servants to take their employers' money to put their own names or faces or busts on these public buildings. A school building ought not to be an exhibit of any private opinion or theory of any individual. It ought not to be made to conform to the opinions or desires of a small fraction of the community unless the fraction stands for the public welfare as crystallized in law. And in these cases the minority can meet the majority by recourse to school and State authorities.



FLOOR PLAN

A school plant is not legitimately a means of a real estate boom. The buildings cannot be equally near very many of the children. The democratic principle of the greatest good to the greatest number ought to rule. In cities this principle requires the board of education to take account of the direction in which the city is being populated.

In the last analysis, the public school plant is made to serve all the interest of all the children of all the people. If the community so thinks of the school plant and seeks a wise and real school architect, it may pro-

(Continued on page 222)

COVERED PLAY SPACE

TYPICAL CLASS ROOM

STANFORD UNIVERSITY SCHOOL DISTRICT ELEMENTARY SCHOOL
JOHN J DONOVAN ARCHITECT

The Architect As a Collaborator in School Surveys

By JOHN J. DONOVAN, Oakland, Cal.

IN reading the "Building Situation and Medical Inspection," Report of the School Survey of the City and County of Denver, Colorado, by Prof. Lewis M. Terman, Ph. D., Leland Stanford Jr. University, the architect or educator familiar with the basic principles governing modern school house design and construction is impressed with the complete thoroughness of the investigation, the keen observatory powers of the author and his ability to record his findings. It seems hardly creditable that a worker outside of the architectural and mechanical engineering profession could possess such a fund of information so necessary in the practice of these two professions, and acquired only after an extended experience; yet the architect and the engineer will learn much in Dr. Terman's report on how not to build a school by following the numerous salient criticisms of the plan, arrangement, construction, lighting orientation, heating, ventilation, sanitation, and the many other component parts of the school building, all of which are carefully analyzed and criticised. And the value of the report lies in the constructive recommendations offered as replacements to the faults found in the work under observation.

The writer of this article heartily recommends that this report be given a prominent place in every architect's and school man's library as a reference for school surveys and as an assistance in examining plans for new school building.

We might venture on the thin ice of suggestion, however, by observing that little or no comment was made regarding the merits of the architecture of the buildings. To the indifferent-minded layman this feature of a survey is of minor importance, and to others it is a very secondary consideration; but to those who realize the great educational and economic value to the State, and the refining influence not only upon the students attending the school, but upon the community as well, of well-designed public buildings of good taste in composition and materials, this function of a school survey and of school building is complementary to the technical side of the problem.

MAIN ENTRANCE, McKINLEY ELEMENTARY SCHOOL, SAN LEANDRO, CAL.
JOHN J DONOVAN ARCHITECT

This may be debatable, but all controversy is closed by recalling the principle that no matter how beautiful such an institution may be, or how great an æsthetic influence it may have, it is more or less a failure unless its plan and details fully meet the requirements of its purpose, namely, that of housing in order to teach and to learn under the most efficacious conditions.

Success in this field of architecture is dependent entirely upon a sincere desire that every technical problem of the whole be first solved before attempting the exterior architectural composition, although we all

FRONT ELEVATION, McKINLEY ELEMENTARY SCHOOL, SAN LEANDRO, CAL.
JOHN J DONOVAN, ARCHITECT

FRONT ELEVATION, WASHINGTON ELEMENTARY SCHOOL, SAN LEANDRO, CAL.
JOHN J DONOVAN, ARCHITECT

know how both lead and fit into each other. Ultimate success cannot be attained any other way nor by the absence of such a spirit.

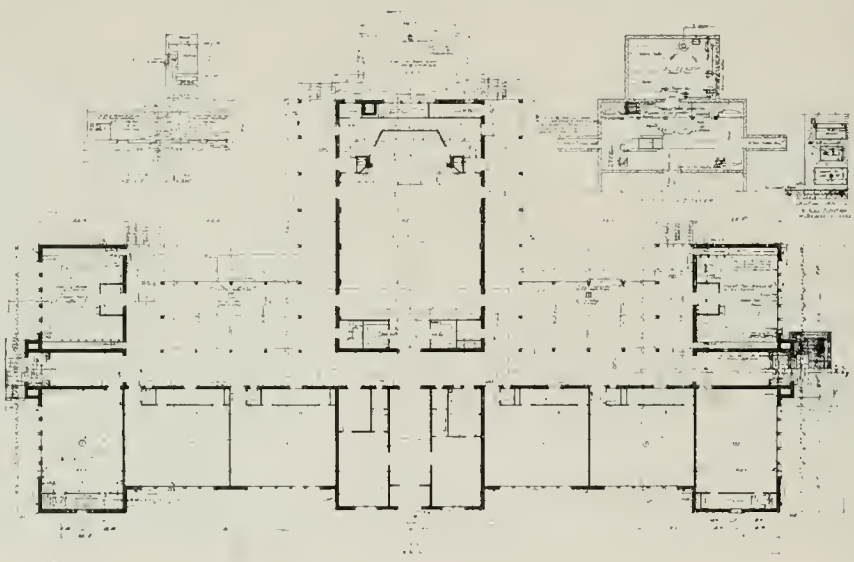
Hence, the most exacting hard-boiled utilitarian will not deny the soundness of the premises taken to plead for better architecture in our schools and for a wider collaboration between the school man and the architect.

It may be that Dr. Terman found so many faults in the schools of Denver that the architecture counted for naught, and that is exactly its value, judging from his report of the prevailing conditions. On the other hand, let us assume that a similar survey would bring to light a group of schools measuring up to the requirements for educational work; would it not be of added value to the report to have a criticism of the good or ill effects of their architecture, so that a community, aye, and the architect, might know whether they were traveling in a rut or in a broad and progressive way? Many of the recently published photographs of both high and elementary schools, built within even the last few years, prompt this suggestion. It is apparent that the rule requiring at least twenty per cent of floor area in glass area has so thoroughly obsessed the architects that their buildings have a most forbidding appearance. In fact, the photographs of the finished work indicate very little effort if any to accomplish anything more than to provide sufficient light to the interior. This is particularly true of the school buildings of the Middle West, which have come to our notice and observation. The community which today is part and parcel of the school has been woefully neglected. In many States, particularly Ohio, the laws governing the construction of schools are so drastically rigid, and in many instances rigid in the wrong direction, that the cost of school buildings is entirely out of proportion to the results attained.

In Ohio, the School Building Code was passed by the State Legislature shortly after the disastrous Collingwood fire, where more than one hundred and eighty children lost their lives. In consequence of this hasty legislation, the code would indicate that the succeeding generations must endure eyesore punishments from the barren, prison-like monuments as reminders of the laxity and shortsightedness of those that preceded them. Lest there be any misunderstanding, let me say that safety first, last and all the time is the course to follow, but with intelligence, training and understanding of the problem, safety ought to be had without botching up the remaining parts of the problem.

Should our State ever incorporate in its statutes a school building law, it is the earnest hope that the school man, the architect, the civil and mechanical engineer will be called in to deliberate on its draft for flexibility as well as for safety. And the Lord knows that such a comprehensive statute is very much needed.

The Committee on Standardization of Schools of the National Education Association, of which the writer is a member, has



FLOOR PLAN, BROADMOOR SCHOOL, SAN LEANDRO, CAL.
JOHN J DONOVAN, ARCHITECT

One of the Freehand Drawing Rooms, Oakland Technical High School, Oakland, Cal.
JOHN J. DONOVAN, Architect H. HORNBOSTEL, Consulting Architect

Typewriting Class Room, Oakland Technical High School, Oakland, Cal.
JOHN J. DONOVAN, Architect H. HORNBOSTEL, Consulting Architect

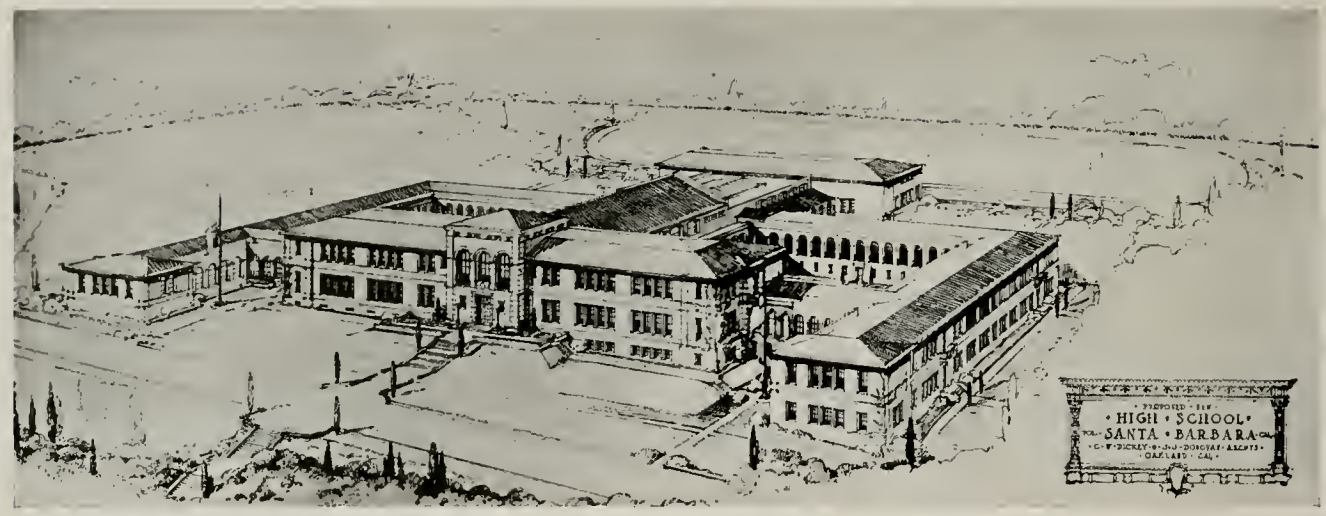
mapped out a tentative program, including the study of school building codes with the intention of making recommendations and suggestions for just such regulations.

Greatly is it to be desired that the more capable men of the architectural profession turn their endeavors to this field of work. For with such an entry of men of culture, refined taste and ability to master

McKINLEY ELEMENTARY SCHOOL, SAN LEANDRO, CAL. JOHN J. DONOVAN, Architect

One of the Cooking Rooms, Oakland Technical High School, Oakland, Cal.
JOHN J. DONOVAN, Architect H. HORNBOSTEL, Consulting Architect

Costume Designing Class, Oakland Technical High School, Oakland, Cal.
JOHN J. DONOVAN, Architect H. HORNBOSTEL, Consulting Architect



PERSPECTIVE

details, and of architectural ability, will great improvements follow. A new spirit, vital to education and society in general will be felt and will make for advancement in this world of ours which is ever struggling to lift itself up and out of the bondage of the trite and hackneyed repetitions of half-baked thoughts and unskilled executions.

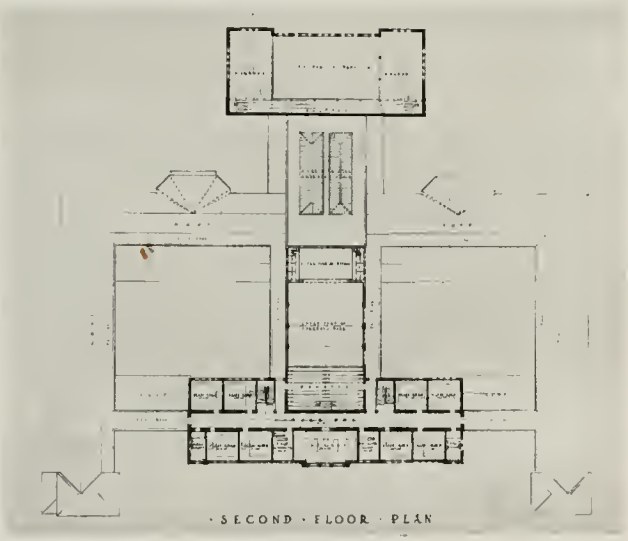
Surely the men of the educational world will welcome the architect as a co-worker and collaborator in the survey of a school district. Such a union will mean much for the complete report. It will lead on to more light on the wisdom exercised in public expenditures. It will bring the architect closer to the school. His understanding of its functions and workings will be improved and made clearer, and the world will profit by this increased knowledge. The fairness and truth of his criticisms, based above pettiness or self-importance, will serve to enlighten not only those whose work he passes on, but those who have similar problems to solve, including the school man, and last, but not least, the world will be that much better off.

The Educational Function of School Architecture

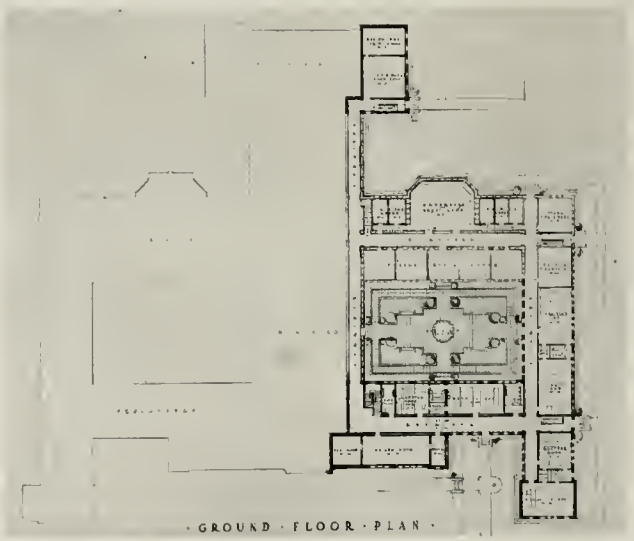
(Continued from page 217)

duce grounds, buildings and equipment that will become efficient means of daily reminding the children of the community's fine desires and interest in them.

The utility, stability and beauty of the buildings and grounds may become the means of developing the tastes of the children of the community. The harmony, proportion, symmetry, ornament and color of a beautiful school plant daily impressed upon the plastic mind and body of the children develop standards of judgment. If the school teachers and the community are conscious of these important means and make the right use of them, they become means also of developing community consciousness, civic pride and good citizenship.

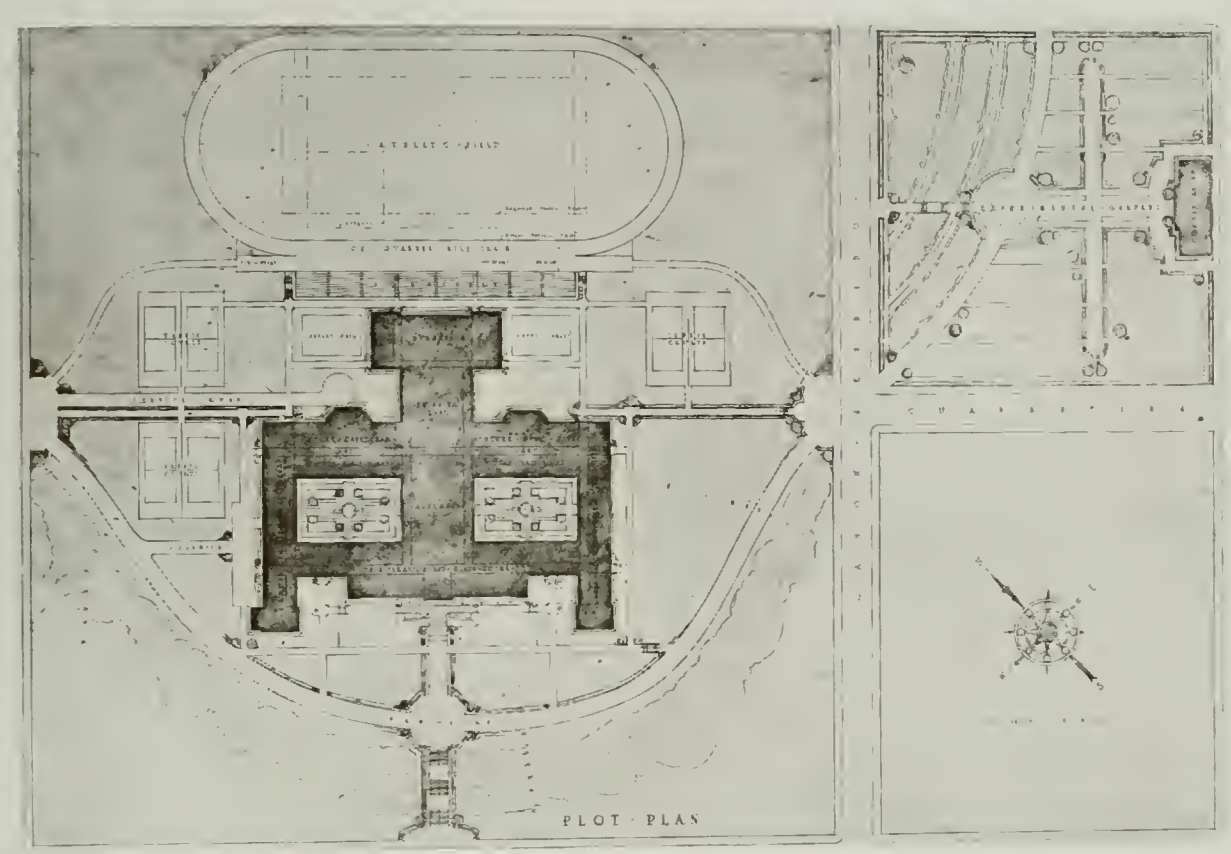


SECOND FLOOR PLAN

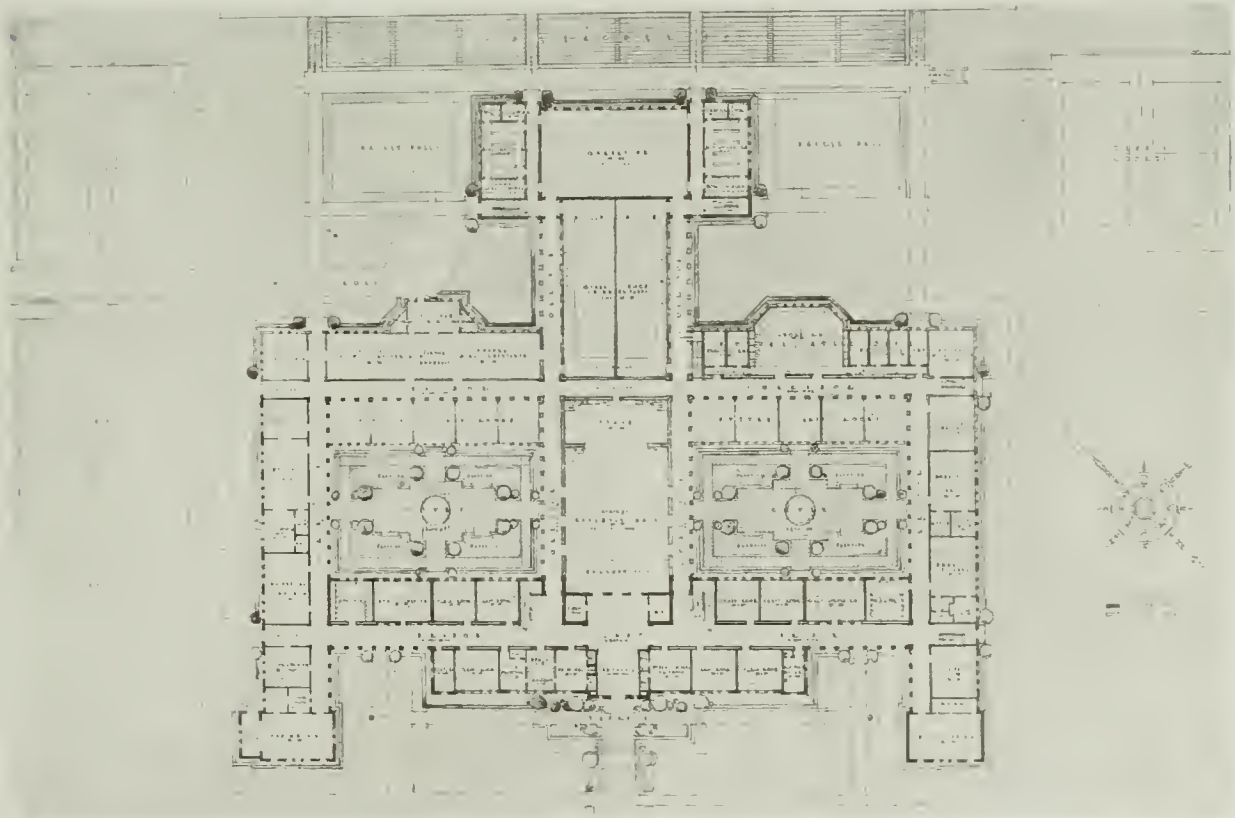


GROUND FLOOR PLAN

PROPOSED NEW HIGH SCHOOL, SANTA BARBARA, CAL.
C. W. DICKEY AND JOHN J. DONOVAN, ARCHITECTS



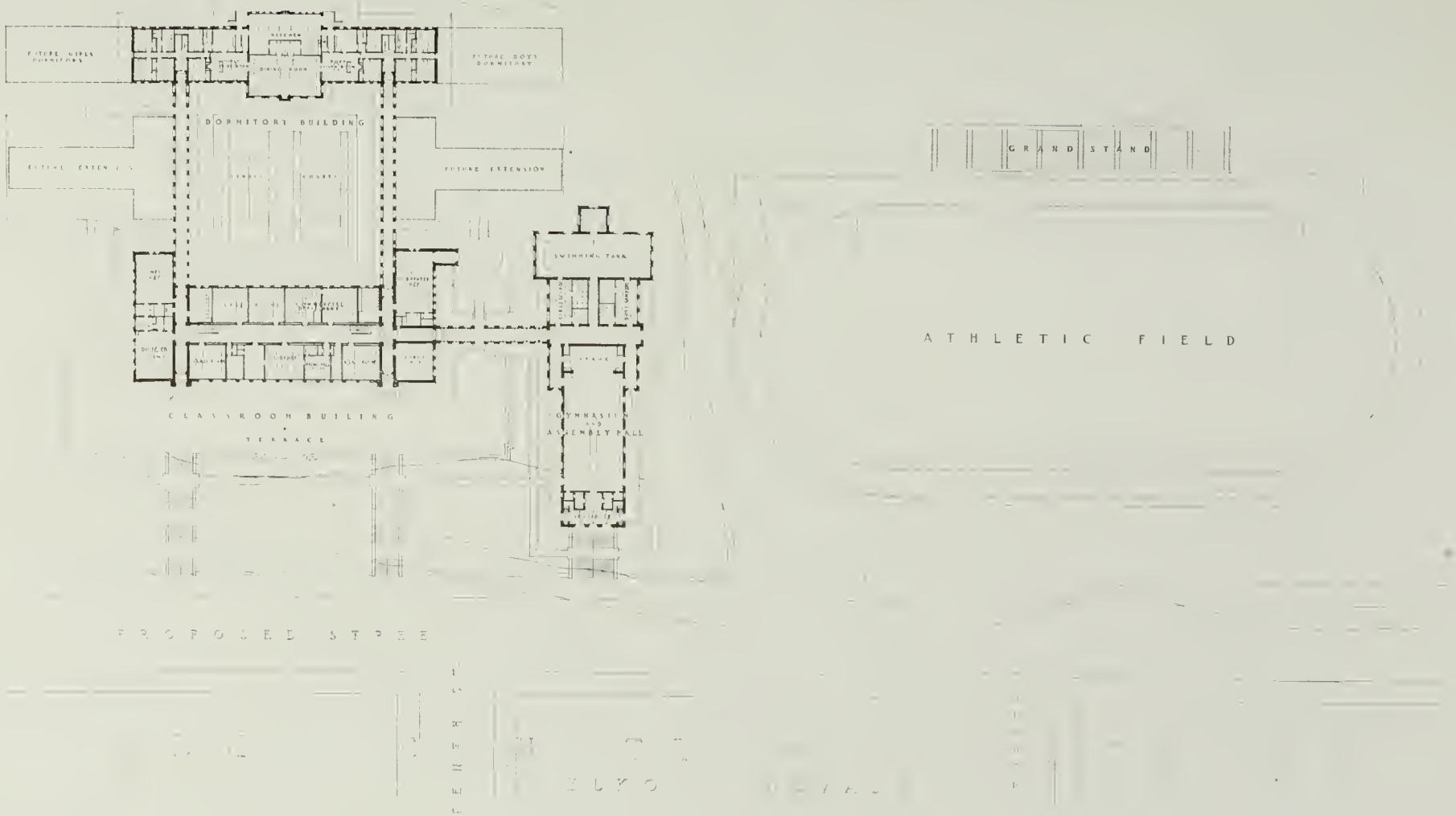
PLOT PLAN



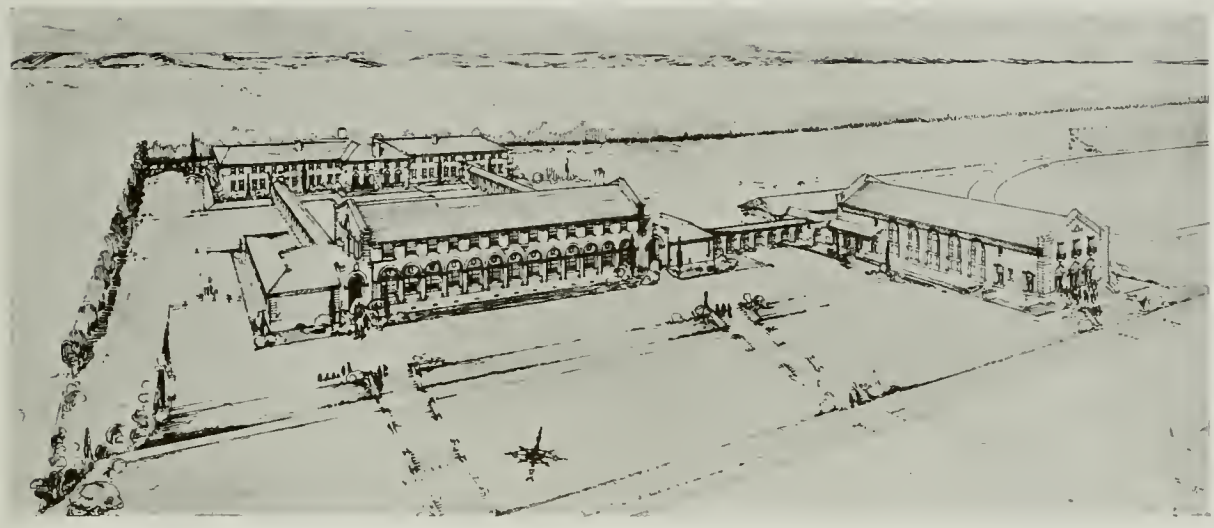
FIRST FLOOR PLAN

PROPOSED NEW HIGH SCHOOL FOR SANTA BARBARA, CAL.

C. W DICKEY AND JOHN J. DONOVAN ARCHITECTS

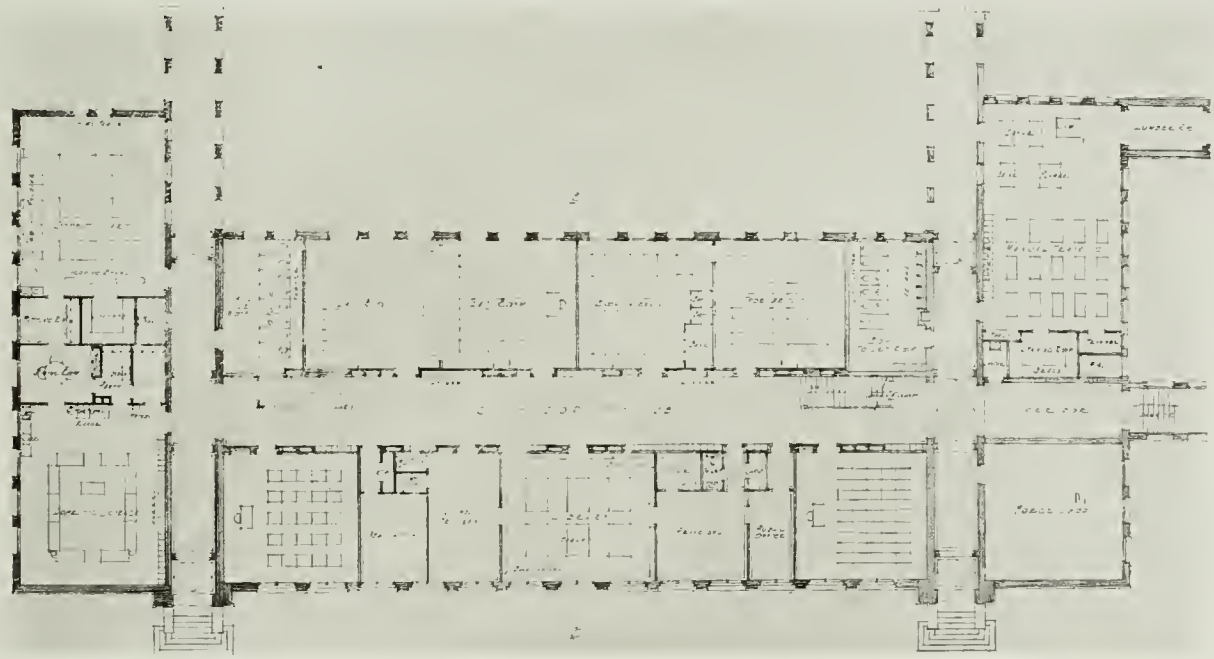


ELKO COUNTY HIGH SCHOOL, ELKO, NEVADA
C. W. DICKEY AND JOHN J. DONOVAN, ARCHITECTS



PERSPECTIVE

GENERAL ELEVATION

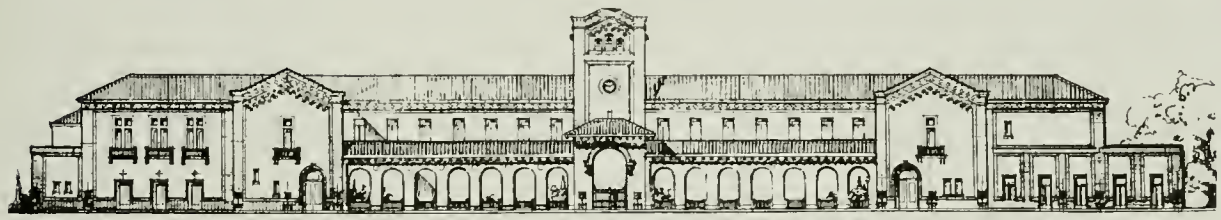


FIRST FLOOR PLAN CLASS ROOM BUILDING

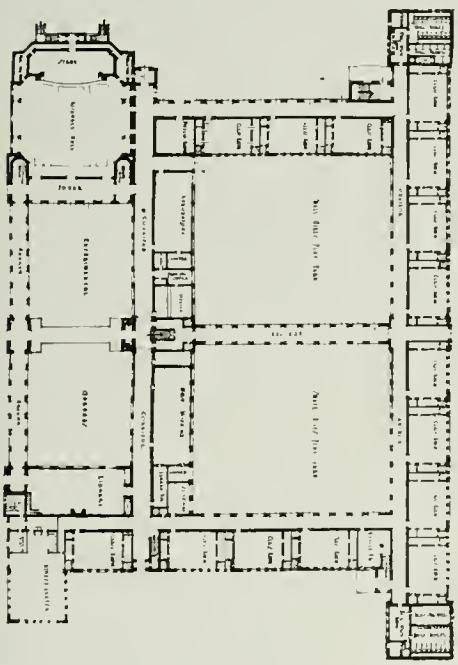
ELKO COUNTY HIGH SCHOOL, ELKO, NEVADA

C. W. DICKEY AND JOHN J. DONOVAN ARCHITECTS

PERSPECTIVE OAK PARK ELEMENTARY SCHOOL, SACRAMENTO, CAL



CYPRESS AVENUE ELEVATION



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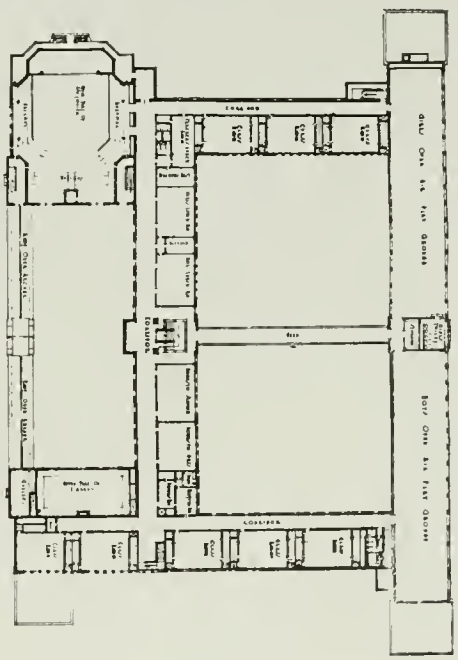
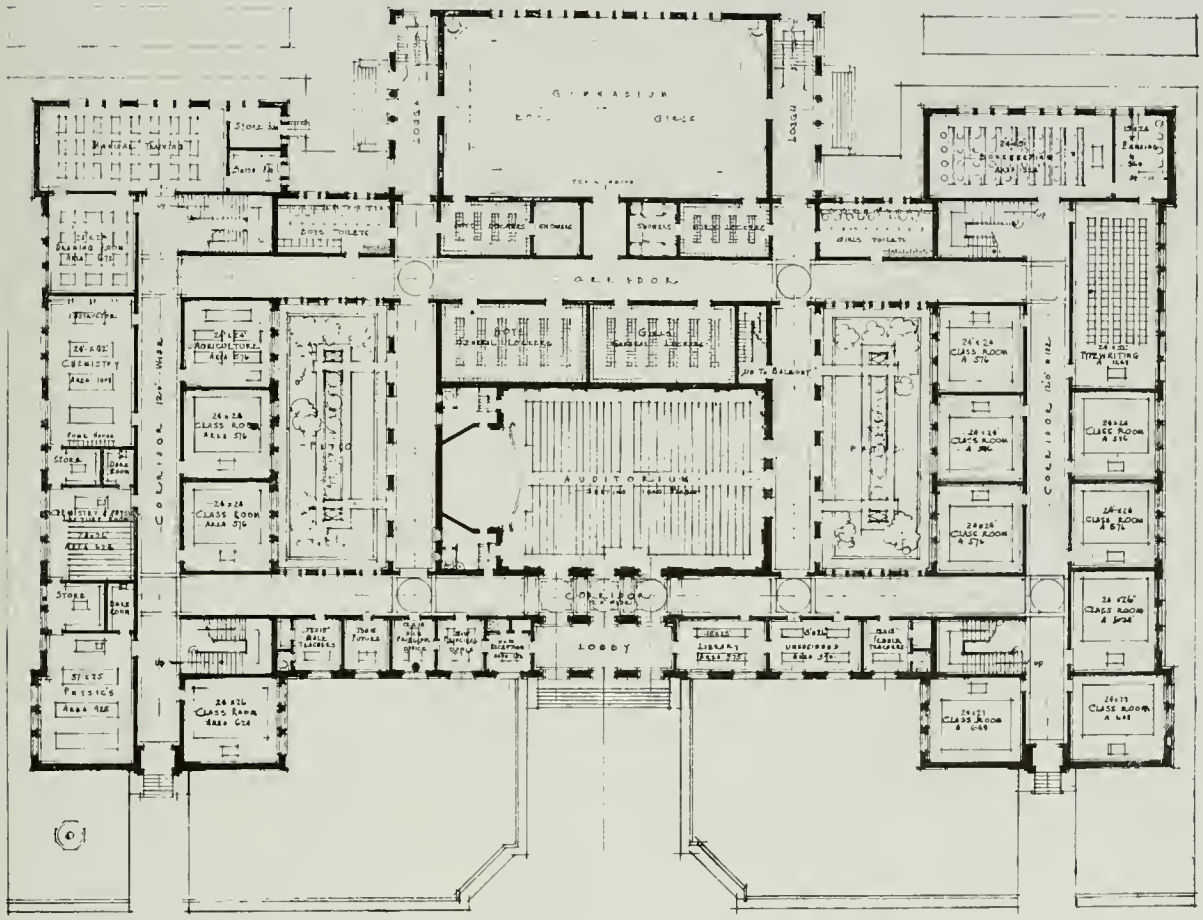


SECOND FLOOR PLAN

OAK PARK ELEMENTARY SCHOOL, SACRAMENTO CAL.
JOHN J. DONOVAN ARCHITECT

FRONT ELEVATION

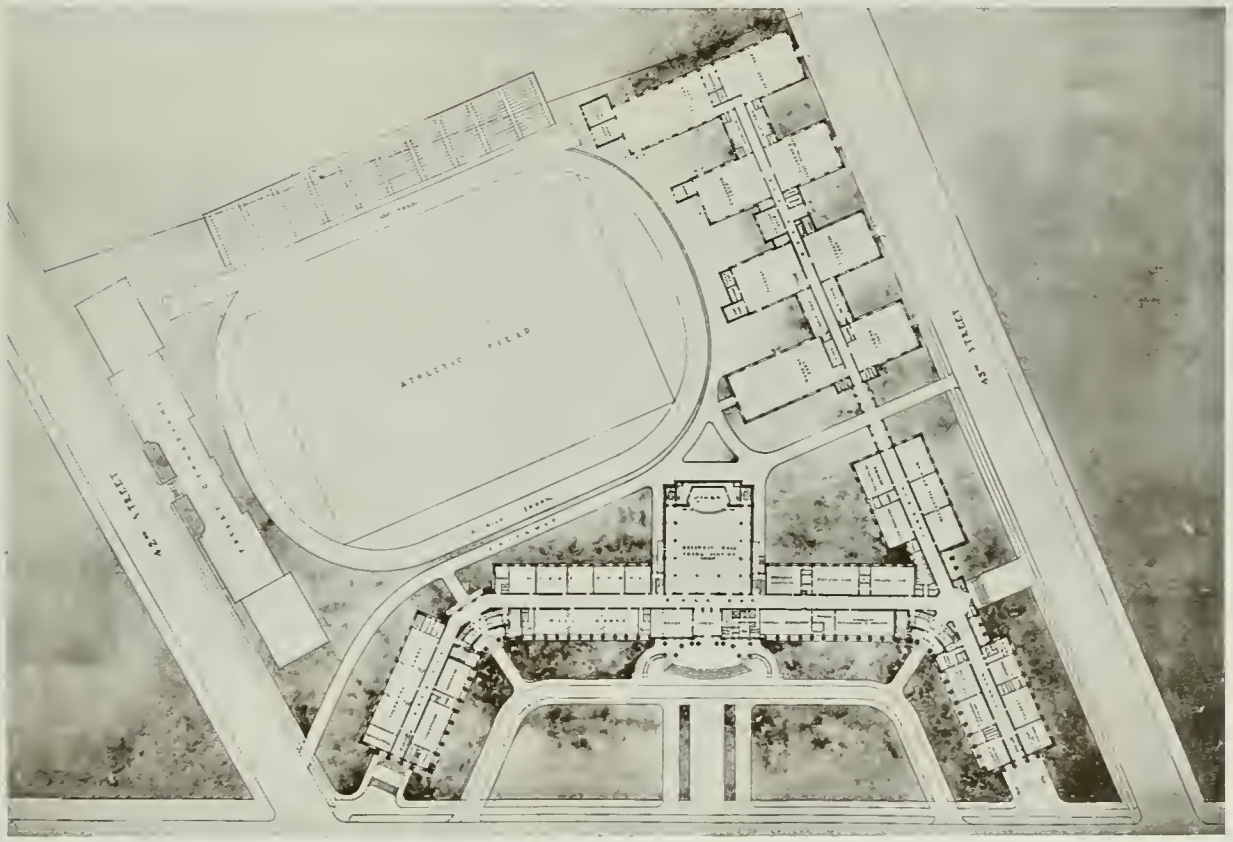


FIRST FLOOR PLAN

PROPOSED CHICO HIGH SCHOOL, CHICO, CAL.

JOHN J DONOVAN ARCHITECT

SECTION OF BROADWAY ELEVATION



FIRST FLOOR AND PLOT PLAN

OAKLAND TECHNICAL HIGH SCHOOL, OAKLAND, CAL.

JOHN J. DONOVAN, ARCHITECT H HORNBOSTEL CONSULTING ARCHITECT

BROADWAY FACADE

CABINET SHOP

WOOD WORKING MACHINE SHOP

NORTH VIEW OF SHOPS

OAKLAND TECHNICAL HIGH SCHOOL, OAKLAND, CAL.

JOHN J. DONOVAN, ARCHITECT H. HORNBOSTEL, CONSULTING ARCHITECT

ADVANCED PHYSICS LABORATORY

FORGE SHOP

ONE OF THE CHEMISTRY LABORATORIES

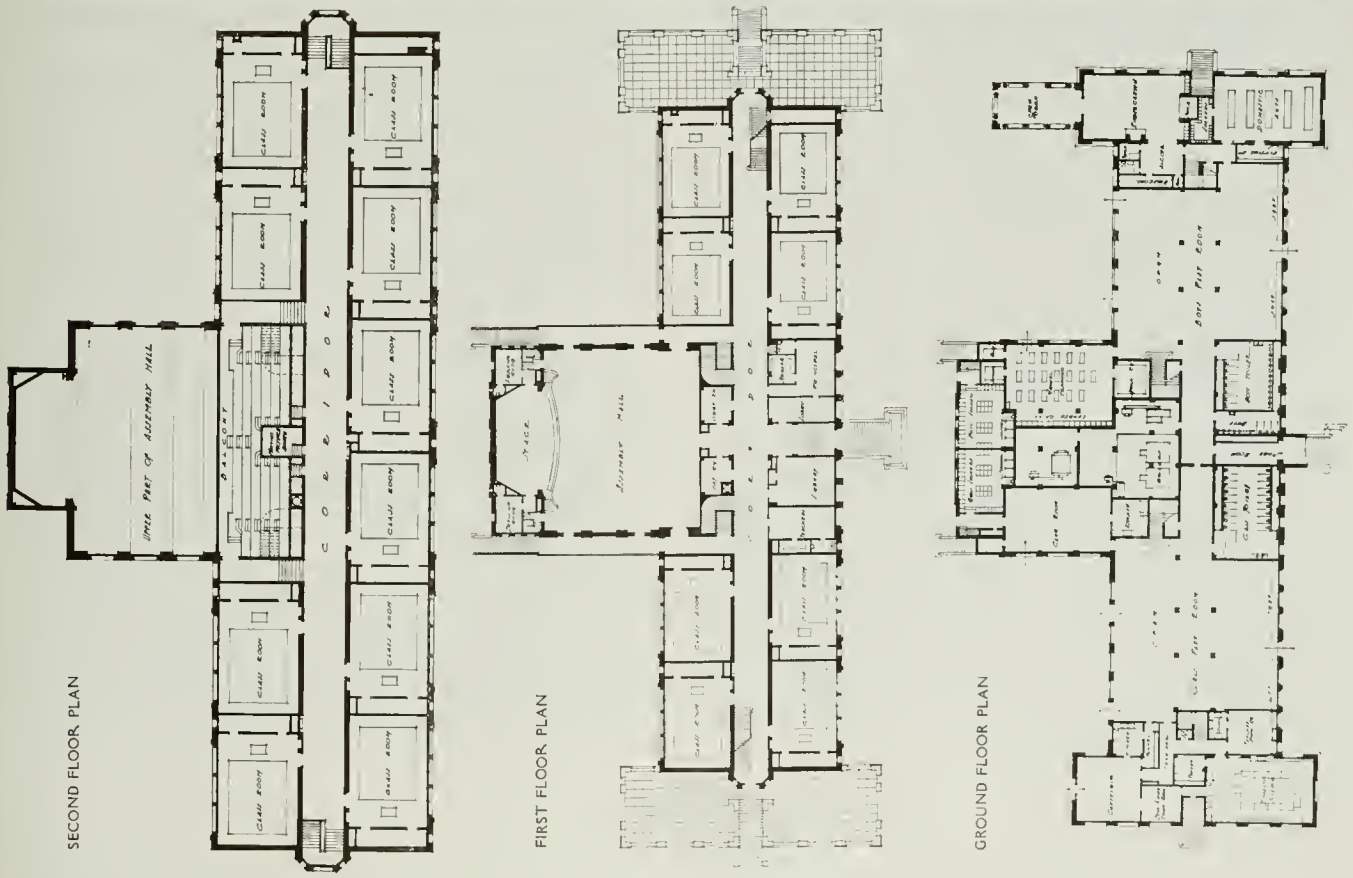
MACHINE SHOP

OAKLAND TECHNICAL HIGH SCHOOL, OAKLAND, CAL.

JOHN J. DONOVAN, ARCHITECT H. HORNBOSTEL, CONSULTING ARCHITECT

SOUTH ELEVATION

NORTH WEST VIEW



CLAWSON ELEMENTARY SCHOOL, OAKLAND, CAL.

JOHN J. DONOVAN, ARCHITECT

WATER CLOSET INSTALLATION FOR BOTH BOYS' AND GIRLS' TOILET ROOMS

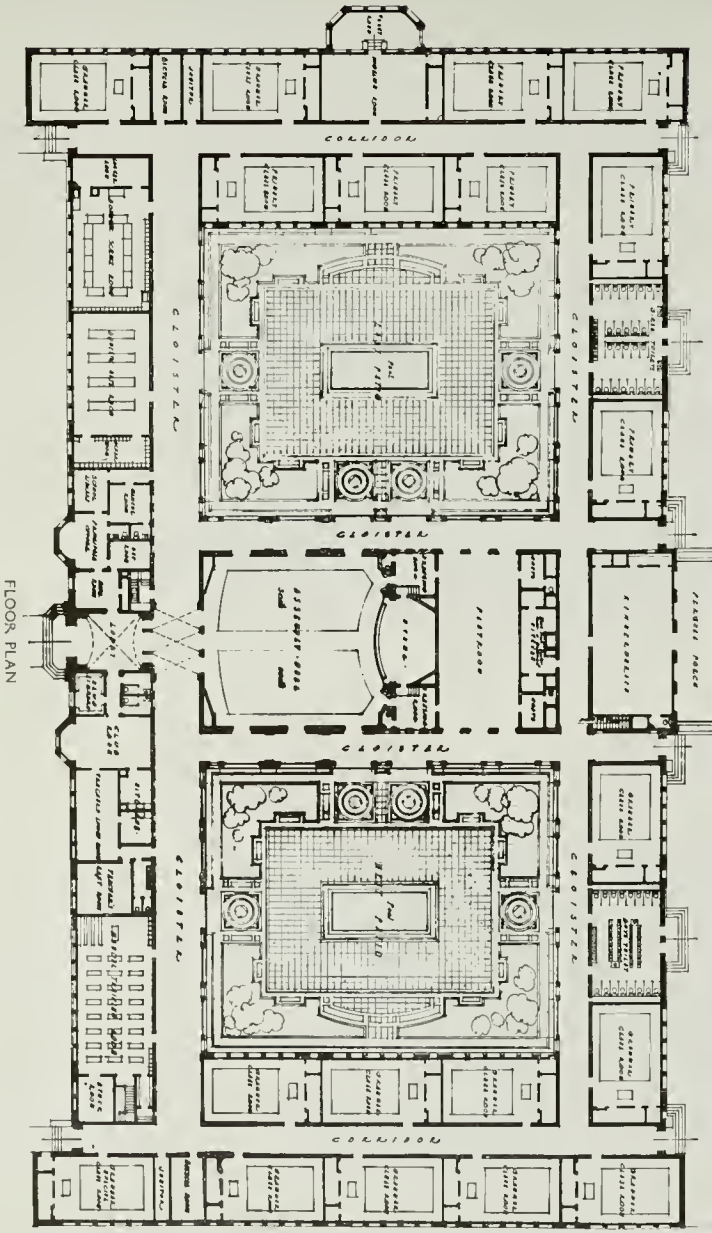
TYPICAL BOYS' TOILET ROOM

MANUAL TRAINING ROOM

DOMESTIC SCIENCE ROOM

CLAWSON ELEMENTARY SCHOOL, OAKLAND, CAL.

JOHN J DONOVAN ARCHITECT



FLOOR PLAN

VIEW FROM PATIO

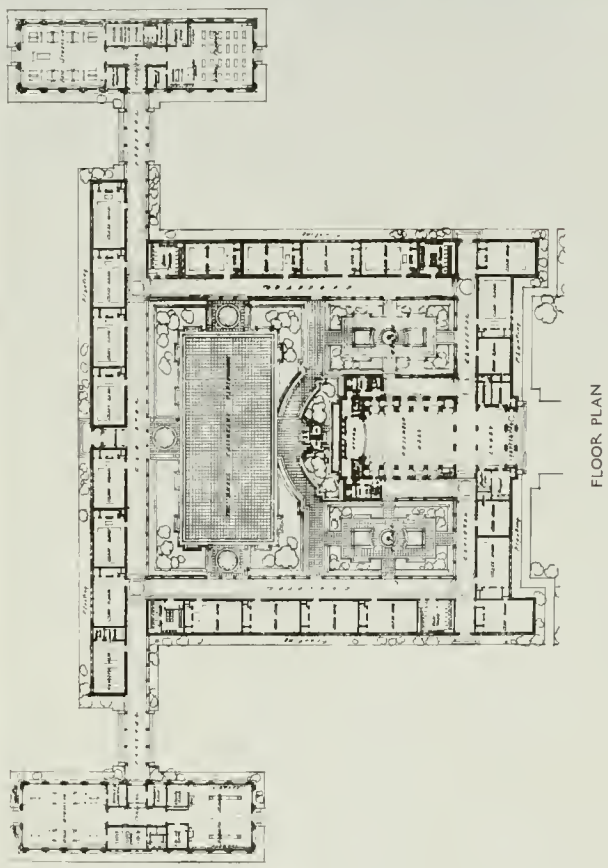
FRONT VIEW

EMERSON ELEMENTARY SCHOOL, OAKLAND, CAL.

JOHN J. DONOVAN AND JOHN GALEN HOWARD, ASSOCIATE ARCHITECTS

MAIN ENTRANCE

PATIO



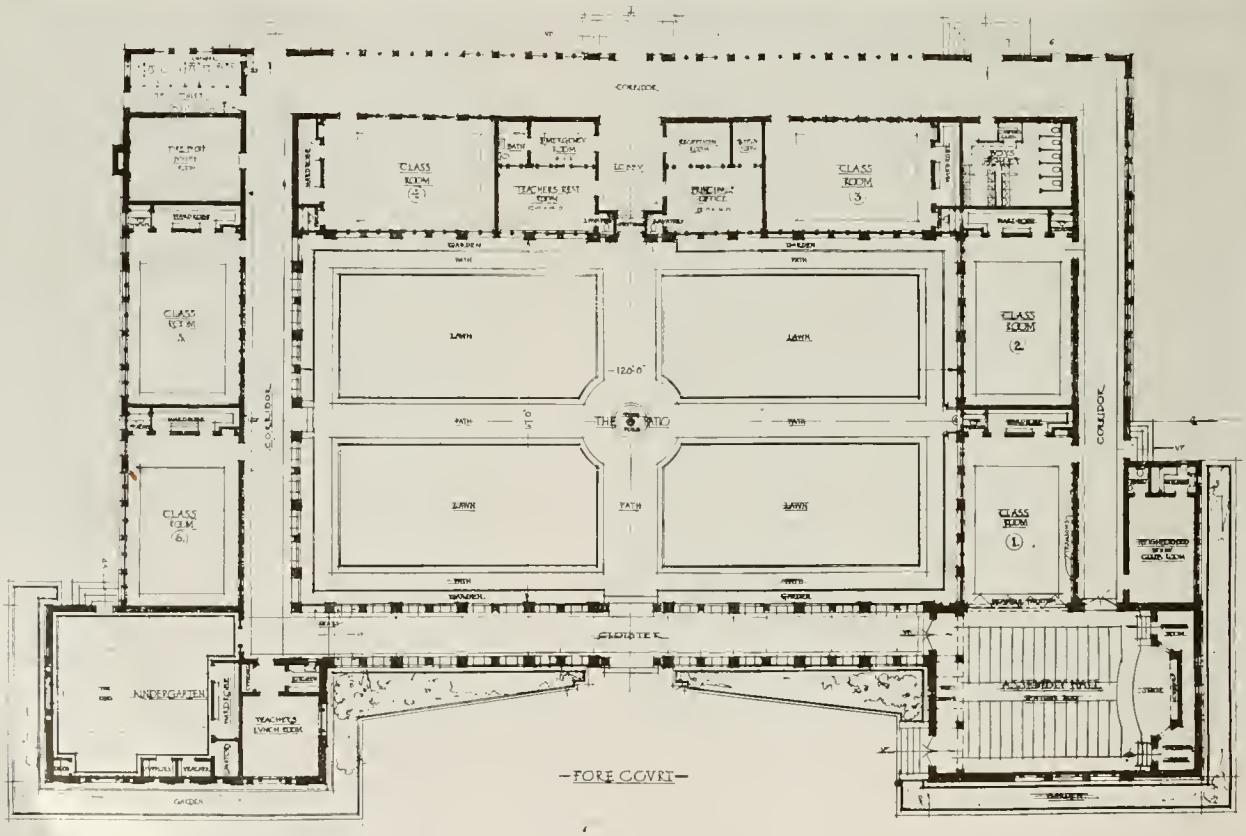
FLOOR PLAN

LOCKWOOD ELEMENTARY SCHOOL, OAKLAND, CAL.

JOHN J. DONOVAN AND LEWIS P HOBART, ASSOCIATE ARCHITECTS

FRONT ELEVATION

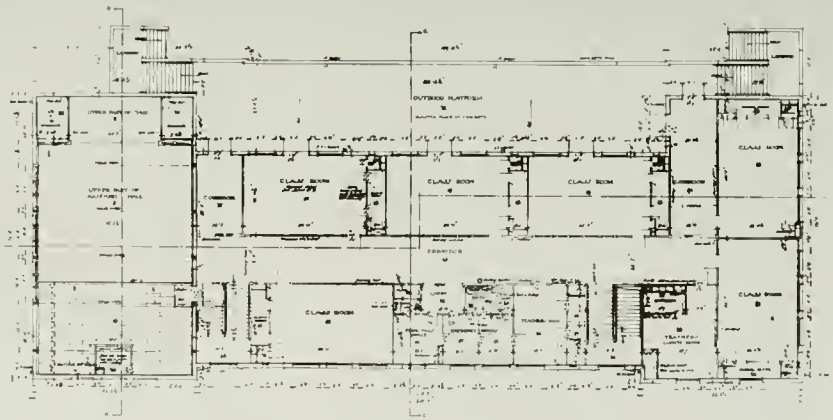
PATIO



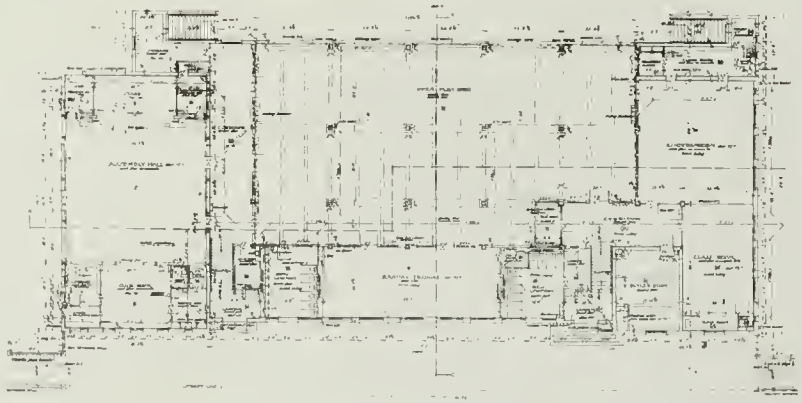
FLOOR PLAN

SANTA FE ELEMENTARY SCHOOL, OAKLAND, CAL.

JOHN J. DONOVAN, ARCHITECT



MAIN FLOOR PLAN



GROUND FLOOR PLAN

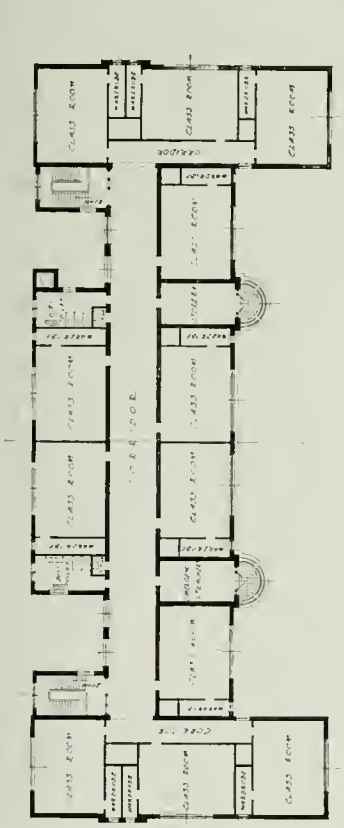
TERRACE FOR OUT-OF DOOR STUDY

McCHESNEY ELEMENTARY SCHOOL

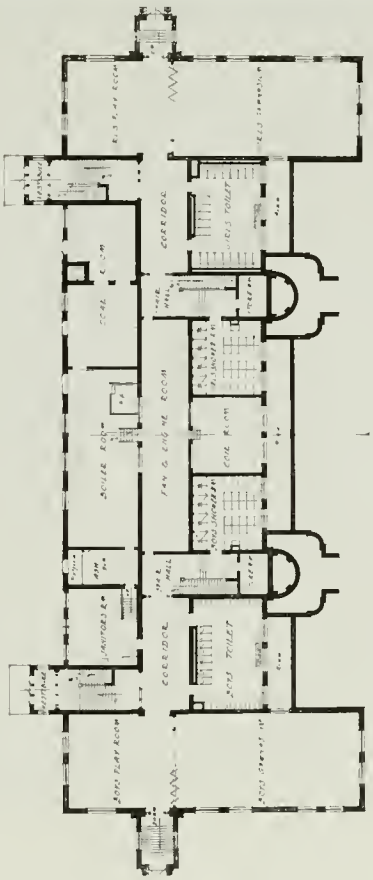
McCHESNEY ELEMENTARY SCHOOL, OAKLAND, CAL.

JOHN J. DONOVAN ARCHITECT

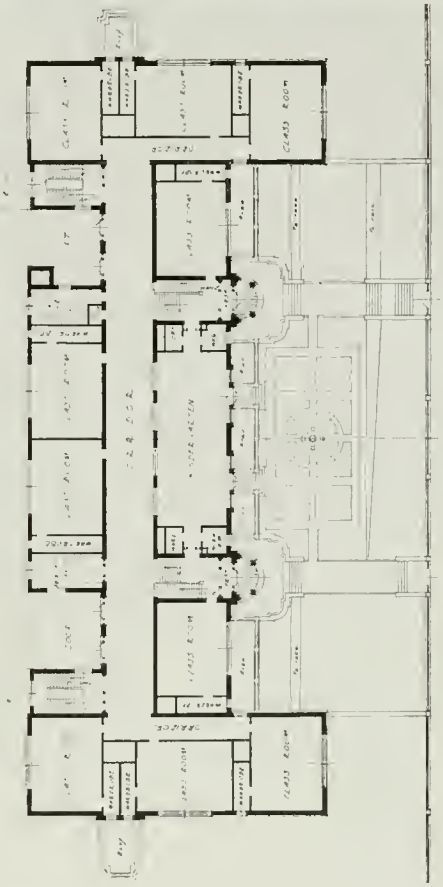
DETAIL OF FRONT ELEVATION



SECOND FLOOR PLAN

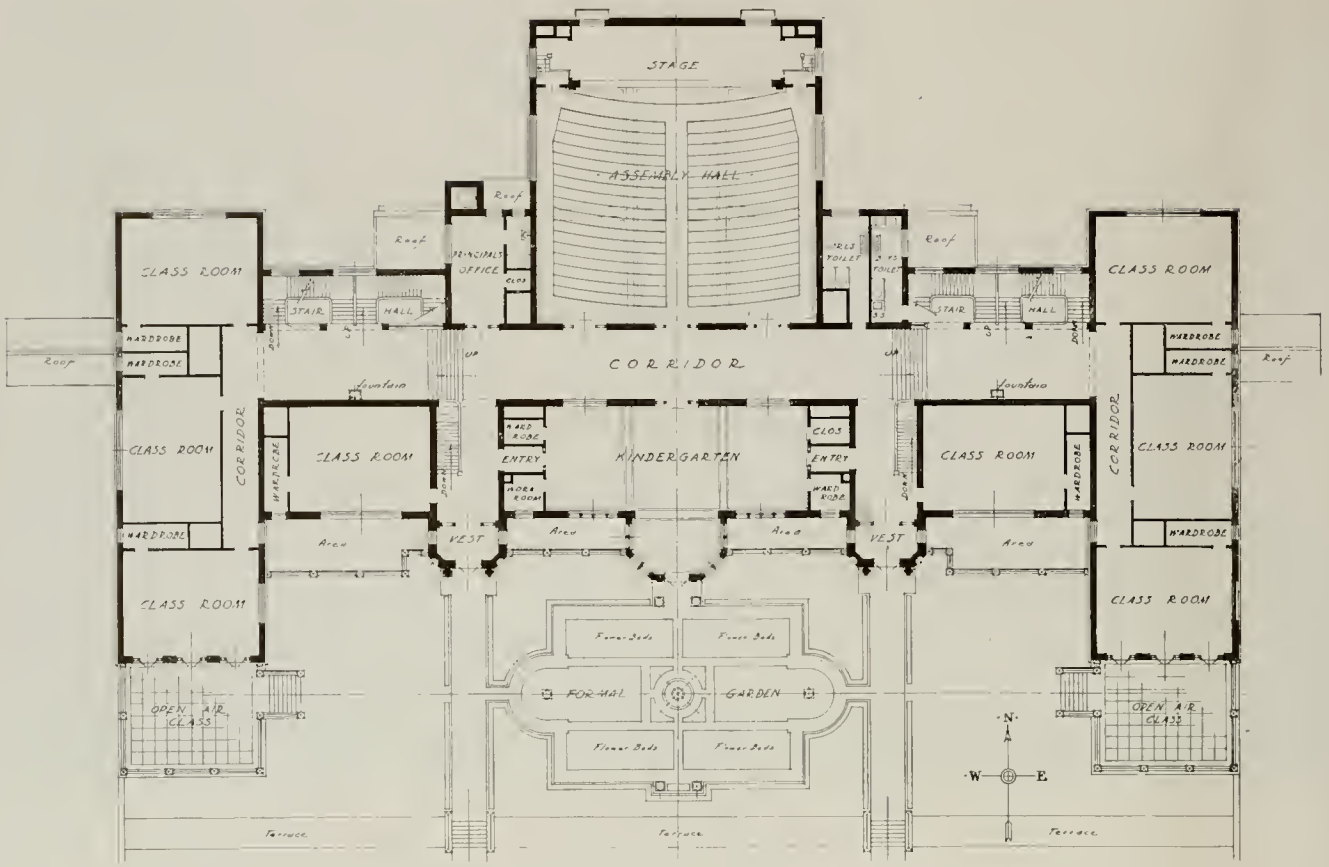


GROUND FLOOR PLAN



FIRST FLOOR PLAN

PIERRE LACLEDE SCHOOL, ST. LOUIS, MO.
WM B ITTNER, ARCHITECT



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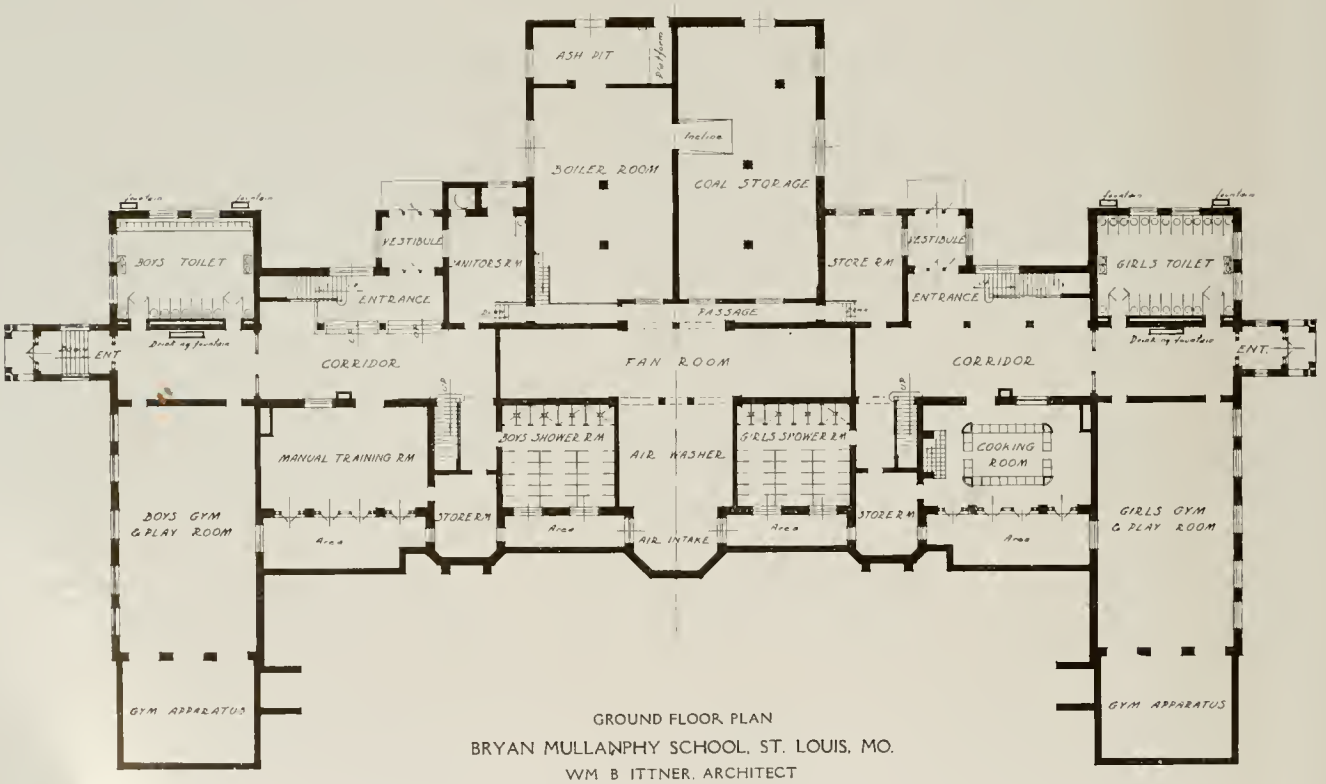


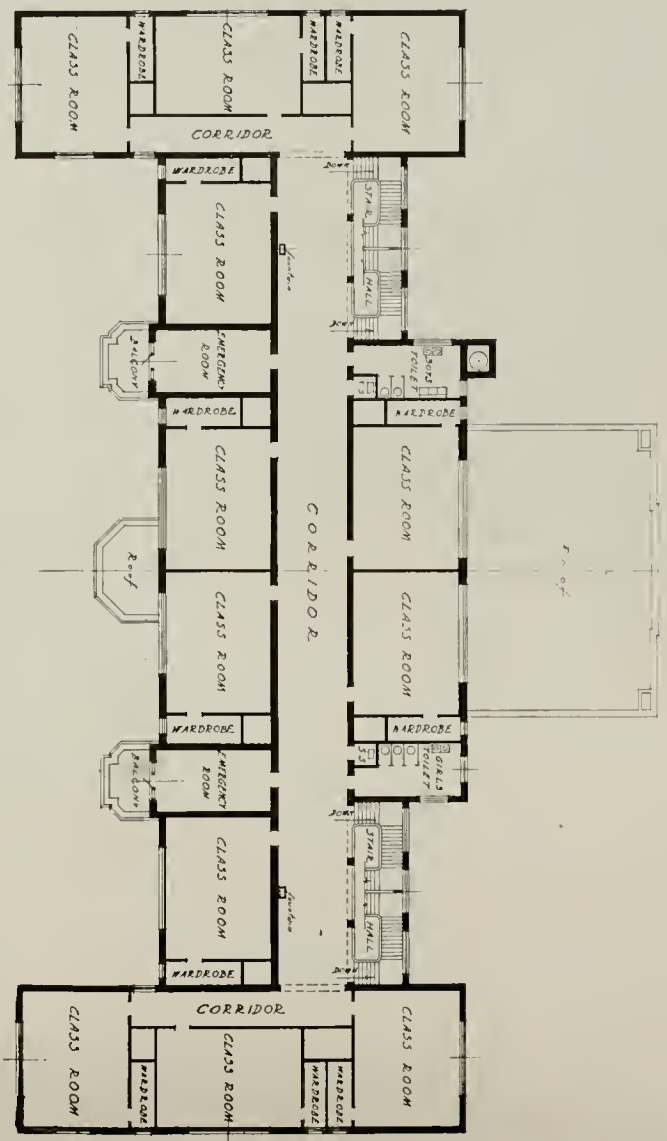
GROUND FLOOR PLAN

BRYAN MULLANPHY SCHOOL, ST. LOUIS, MO.

WM B ITTNER, ARCHITECT

BRYAN MULLANPHY SCHOOL, ST. LOUIS, MO.
WM B ITTNER, ARCHITECT

MAIN ENTRANCE



SECOND FLOOR PLAN

BRYAN MULLANPHY SCHOOL, ST. LOUIS, MO.
WM. B ITTNER, ARCHITECT

School Buildings of St. Louis, Mo.

By WM. B. ITTNER, F. A. I. A.

THE typical grammar school buildings of St. Louis are represented in the Bryan-Mullanphy and the Laclede schools, plans of which are presented herewith. The buildings, always limited to a height of two stories, upon which are distributed its class rooms, are of the open or "E" type plan, generally set upon broad terraces, with their ground or basement floor abundantly lighted, and opening directly upon the playground. The buildings, except in the case of the smaller units, contain from twenty to twenty-four class rooms, a kindergarten, which is always the equivalent of two class rooms, a principal's office, a teachers' rest room, and an emergency room, or clinic; two gymnasiums, two play rooms, manual training and domestic science room, and the necessary space for the heating and ventilating apparatus, fuel, and room for the janitors; if in the congested districts, shower-bath rooms for both boys and girls are also included in the equipment.

BRYAN MULLANPHY SCHOOL, ST. LOUIS, MO.
WM. B. ITTNER, ARCHITECT

The class rooms are twenty-four feet wide and thirty-two feet six inches long. They will accommodate fifty pupils each; are unilaterally lighted, and provided with natural slate blackboards and bookcases. The wardrobe, which opens on class room only, is five feet three inches wide and sixteen feet long. It contains the hooks for the pupils' wraps and a built-in rack for umbrellas.

The main corridor is generally fourteen feet to sixteen feet wide, and receives outside light for a considerable part of its length; the secondary corridors are never less than eight feet wide and invariably have outside light.

Three or more stairways are provided in the larger buildings; they are generally of reinforced concrete construction, five feet wide, and are located in relation to the class rooms to give maximum ease for egress and circulation.

Two or more entrances are provided directly to the first floor, with additional entrances to the ground floor opening directly upon the playgrounds.

The general toilets are placed upon the ground floor in well-lighted rooms, lined with white enameled brick; and, to minimize stair climbing, toilets for both sexes are placed upon the class-room floors, each provided with a limited number of fixtures; janitors' broom closets with slop sinks are also provided on each floor. When school baths are provided, they are placed on the ground floor in well-lighted, enameled

(Continued on Page 265)

The Landscape Improvement of School Grounds

By PROF. J. W. GREGG, University of California

IN this great State of California, which nature has so abundantly supplied with a wealth of resources and so much beautiful natural scenery, it would be reasonable to expect that every phase of civic life would be found developing in its own ideal environment. Strange as it may appear, however, the great amount of scenic wealth which nature in a most generous mood so lavishly bestowed upon this fair State, has not made us appreciate fully the æsthetic or practical value of landscape beauty as it should exist around the "homes of men."

View Showing Covered Play Space, McKinley Elementary School, San Leandro, Cal.
JOHN J. DONOVAN, Architect

In many sections of California, this scenic beauty has not been conserved, but totally destroyed to permit of a rapid economic development. In other parts where nature was less generous, we have not sought to create that landscape wealth so essential to the health, happiness and prosperity of the inhabitants.

Our forefathers in New England, while facing problems involving their very existence, did not neglect the development of their home grounds or the improvement of their village streets, as the beautiful old colonial gardens and stately American elms so frequently testify. The love for beautiful gardens and well-developed home grounds, which were such

TYPICAL ELEMENTARY CLASS ROOM, CLAWSON SCHOOL, OAKLAND, CAL.
JOHN J. DONOVAN, ARCHITECT

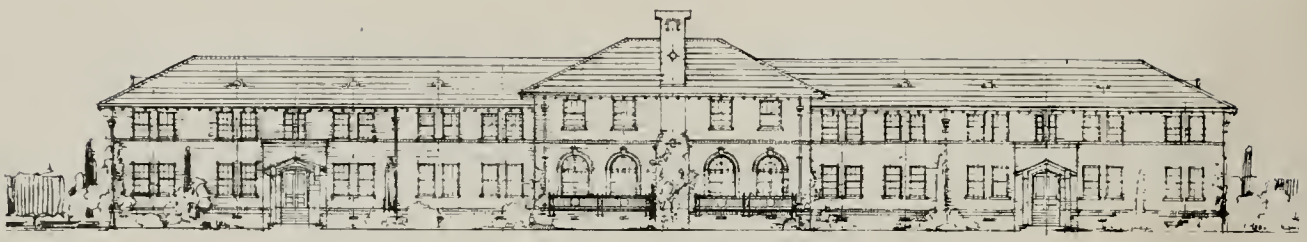
intimate parts of their lives in the mother country, continued to manifest itself, and not until the struggle for an independent national life began, did the spirit of progress in landscape gardening begin to wane. Later, as economic conditions began to improve and the people became more prosperous, there was a renewal of interest in better home surroundings and general civic development.

There were new and unimproved sections of this country, however, which in turn were destined to pass through the usual pioneer stage, but which were not so fortunate as New England, because colonial life with many of its cherished traditions had ceased to exist and the influence it had exerted over the landscape improvement of that section was lost to others. The Spanish Padres in the early days of California established gardens around the missions, but with the advent of the white settler and the "days of '49," the influence of these gardens ceased to exist and they have never since been important factors in the landscape gardening of the State.

Forty-Fifth Street Entrance, Oakland Technical School, Oakland, Cal.
JOHN J. DONOVAN, Architect H. HORNBOSTEL, Consulting Architect

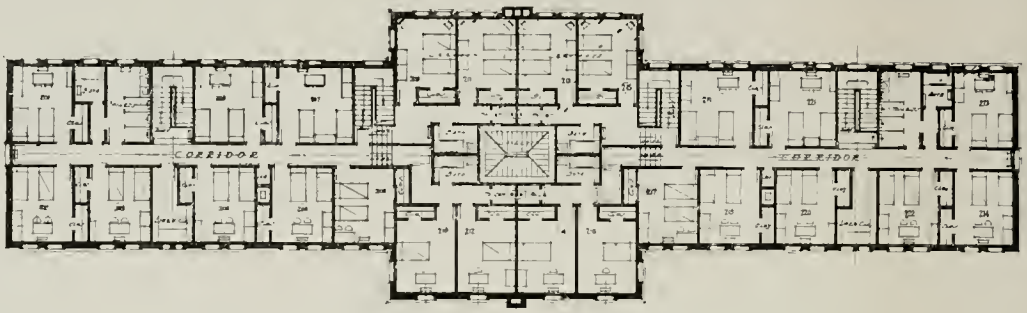
In the early days of California, "gold" was in many cases the sole object in life, and the wandering prospector had little thought or need for anything else. While the rancher—the truest home-builder of the nation—found himself in a new, undeveloped part of the country, possessed of nothing but his most personal belongings and with no thought,

ASSEMBLY HALL, McKINLEY ELEMENTARY SCHOOL, SAN LEANDRO, CAL.
JOHN J. DONOVAN, ARCHITECT



ELEVATION OF DORMITORY BUILDING, ELKO COUNTY HIGH SCHOOL, ELKO, NEV.
C. W. DICKEY AND JOHN J. DONOVAN ARCHITECTS

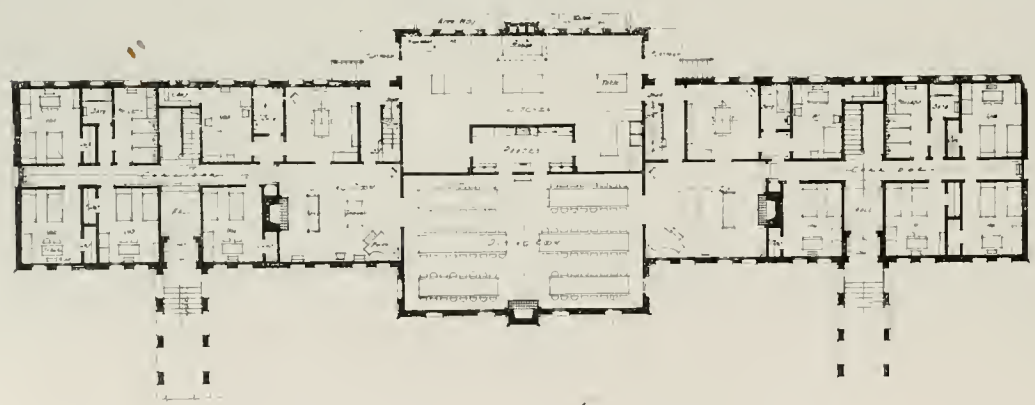
time or money for the improvement of his home environment. The years of toil and pioneering, however, have brought improved economic conditions, the necessities of life have been provided for or are more easily attained, and we can now turn our attention to some of the comforts and pleasures of life, with the realization that many of the real pleasures and even luxuries do not always require vast sums of money to enjoy. What have in the past been considered expensive luxuries are now recognized as most valuable factors in the upbuilding of any individual or community. We are now noticing a growing and widespread interest in landscape gardening as it deals with the improvement of home grounds, school grounds, public parks and numerous other phases of civic or city life. Especially should communities be concerned with the proper improvement of the grounds surrounding those "school homes" in which the children of this State spend so large a portion of their young lives, and at an age when surroundings count so much in the upbuilding of their mental, moral and physical fiber. If the "school home" is to compete with the temptations around about the growing child, it must be fortified with every excellent condition obtainable.



SECOND FLOOR PLAN, DORMITORIES, ELKO COUNTY HIGH SCHOOL, ELKO, NEV.
C. W. DICKEY AND JOHN J. DONOVAN, ARCHITECTS

Dr. Henry Suzzallo, president of the University of Washington, has truly said: "Tradition has decreed that the home of sovereignty shall be beautiful in its structure and setting. The palaces and estates of kings registered this custom among Europeans. How shall America, with local self-government and popular sovereignty, express its reverence for law and liberty! More than any other place, the public school is the seat of American sovereignty! It is the one institution that is visible to every citizen. The American counterpart of the European palace and estate is the American public school and school grounds. Let us make the schools of America as beautiful as they can be made—fine, genial places, where children will be glad to work and citizens pleased to congregate for every neighborly purpose. Let every community learn from architect and landscape designer what can be done to make the intellectual and civic home of young American citizens expressive of the finest ideals we have of living. The example and influence will not be lost. Growing youth will carry new ideals of order and tidiness and beauty into their working lives."

During the last quarter century, the spirit of progress in the improvement of the architecture and physical surroundings of our public schools in general has greatly manifested itself. School architecture has improved wonderfully in the larger towns and cities of the State, but can we say as much concerning the landscape development of school grounds? In the majority of cases, conditions are not materially better than they were twenty-five years ago. We often regret that school grounds are not larger and more beautiful, there-

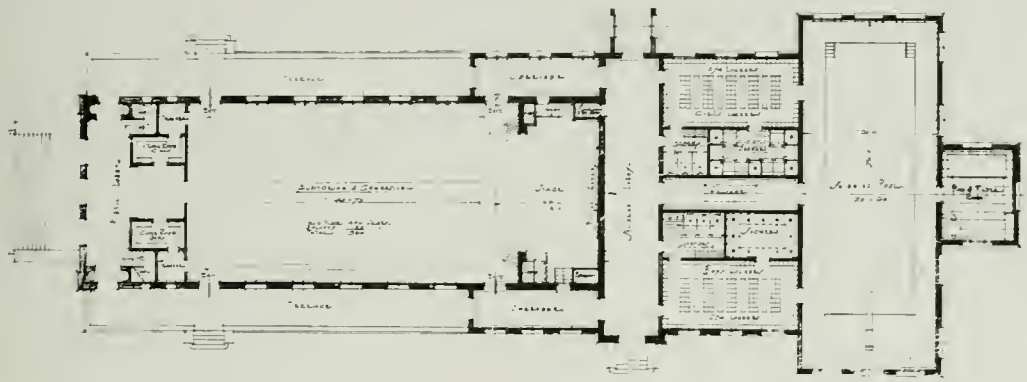


MAIN FLOOR PLAN, DORMITORIES, ELKO COUNTY HIGH SCHOOL, ELKO, NEV.
C. W. DICKEY AND JOHN J. DONOVAN, ARCHITECTS

CLAREMONT ELEMENTARY SCHOOL, OAKLAND, CAL.
JOHN J DONOVAN AND W. D REED, ASSOCIATE ARCHITECTS

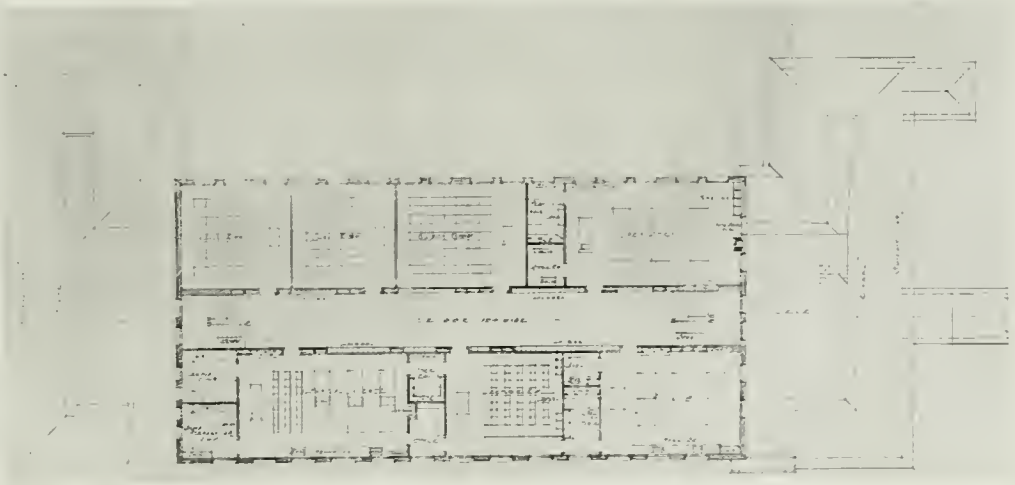
by conforming to improved architecture and providing the numerous elements of equipment in modern life.

One of the first problems that should receive more serious consideration by school trustees is that which concerns the size and location of school grounds. A site should be chosen—other conditions being satisfactory—that is as centrally located as possible in order that distances may be shortened to accommodate the largest number of children. The land should be reasonably level in its natural contour, as little or no grading will then be required to establish satisfactory play areas or care for other features that are more difficult to locate on rough, irregular surfaces. Baseball, tennis, basketball and other desirable games are played with greater satisfaction and pleasure on level grounds, while problems of irrigation in connection with ornamental plantings or school gardens are less difficult of solution. School grounds that are comparatively level are maintained at less expense, present a much better appearance, and permit of a more economic and pleasing development. The time is past when land which has been condemned for other purposes, because of its poor location, poor soil or rough contour, should be purchased for school use. The low cost of such land is usually the determining factor, but it proves to be the most expensive in the end if an ideal development is wanted.



MAIN FLOOR PLAN, GYMNASIUM AUDITORIUM, ELKO COUNTY HIGH SCHOOL, ELKO, NEV.
C. W DICKEY AND JOHN I DONOVAN ARCHITECTS

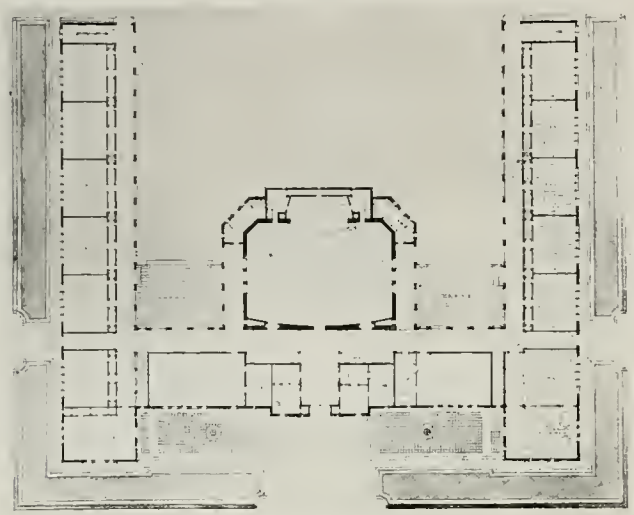
Besides being poorly located, many school grounds are entirely too small. Such areas not only fail to



SECOND FLOOR PLAN, CLASS ROOM BUILDING, ELKO COUNTY HIGH SCHOOL, ELKO, NEV.
C. W DICKEY AND JOHN J. DONOVAN, ARCHITECTS

U STREET ELEVATION

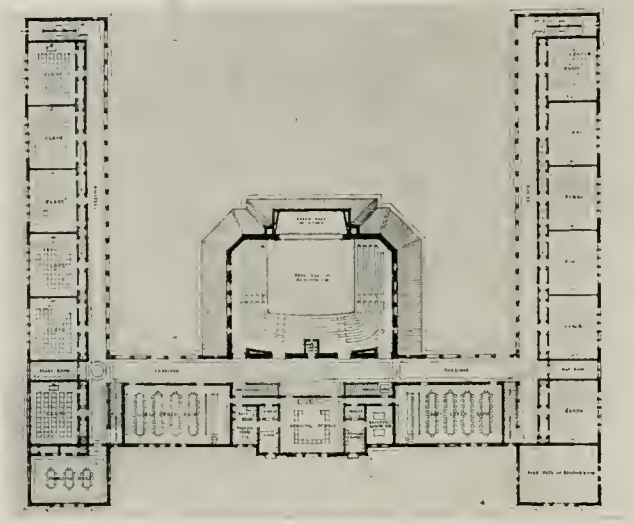
provide for the modern requirements of the school proper, but for the civic needs of the community as well. The time has arrived when the school may properly become the civic center of civic life, and as such, it should be equipped with sufficient land to provide for all the needs of a progressive community.



FIRST FLOOR PLAN

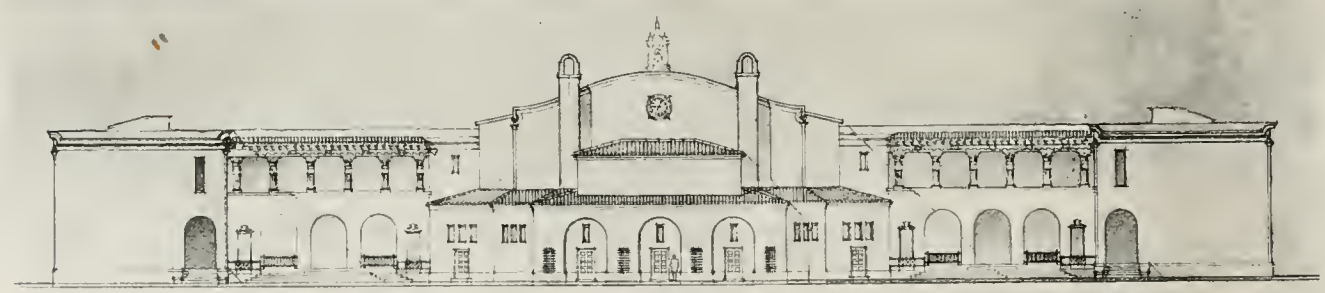
It is now generally acknowledged that children must play and that the playground is an absolute necessity, a little world, with its own problems and interests, in which are taught tact, management, leadership, quickness of thought and action, and many other sterling qualities of which the coming generations will have great need. For this reason, if no other, school grounds should be of sufficient size to provide for all the larger as well as the smaller games and athletic sports that boys and girls delight in.

School grounds should be large enough to permit of the building being located far enough back from



SECOND FLOOR PLAN

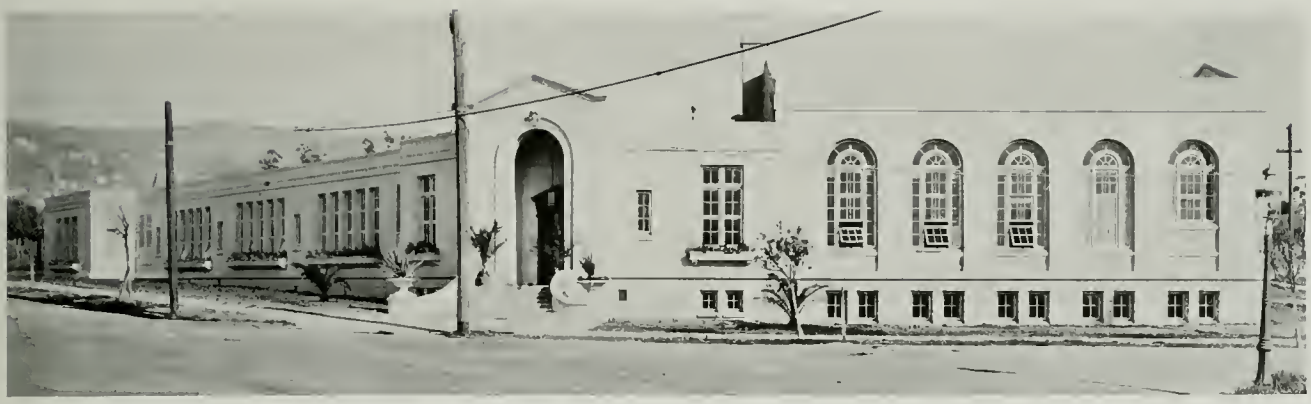
the road that the noise and dust from passing traffic will not become a nuisance. A pleasing landscape approach and setting for the building are a most valuable asset. They indicate the progressiveness of the district, and, above all, are attractive rather than repelling to the school children. Youth is quick to



REAR ELEVATION

SACRAMENTO ELEMENTARY SCHOOL COMPETITION, SACRAMENTO, CAL.

JOHN J. DONOVAN, ARCHITECT



ELEMENTARY SCHOOL, ALBANY, CAL.
JOHN J. DONOVAN, ARCHITECT

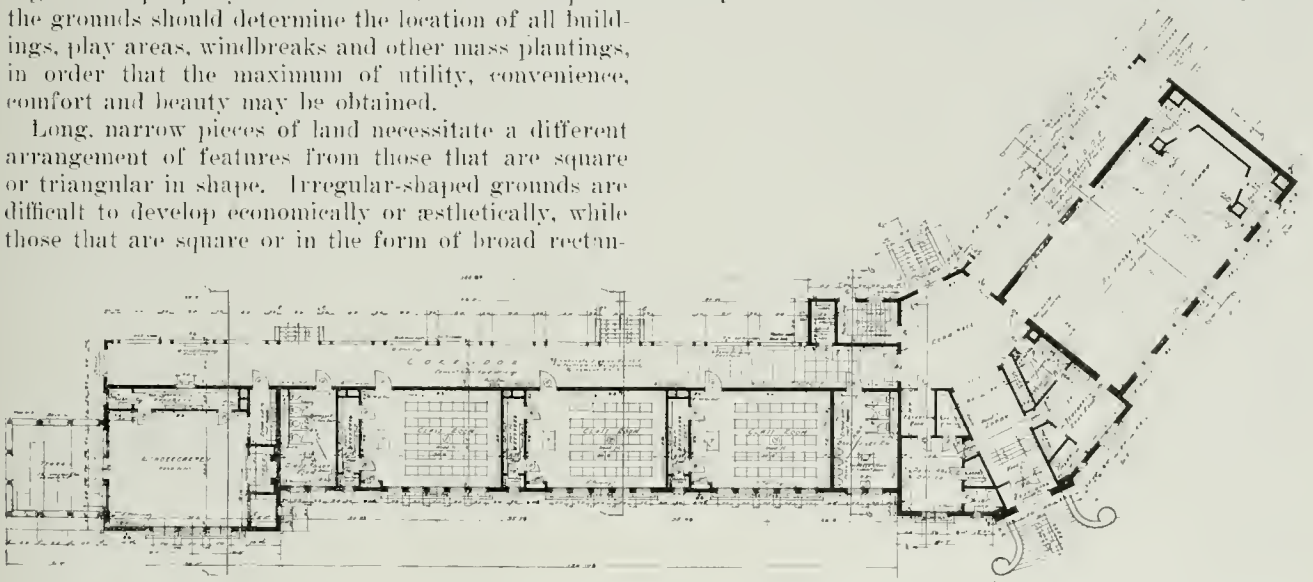
recognize and respond to the influence of "beauty" in the form of trees, shrubs, vines and other landscape material, and the larger the grounds, the greater the opportunity for making them attractive. The problem of maintenance, with respect to cultivation and irrigation, has often determined to a certain extent the size of school grounds and the amount of landscape improvement. This problem is easily solved, however, when a co-operative spirit is developed among trustees, parents, teachers and students.

Little satisfactory development can take place on a half acre. One acre is small enough, and three to five acres are not considered too much for the school that has seventy-five or one hundred children, who must be provided with baseball, tennis, basketball and other play spans. Land values are constantly increasing, and it is safe to predict they will never be lower. It should be considered good business, therefore, to acquire more land than may be needed immediately, in order to provide for future needs.

The development of school grounds is influenced also by their exposure and shape; good light at all times, sun during the winter months and protection from severe prevailing winds are three very important factors to be considered in selecting and improving school property. The orientation and shape of the grounds should determine the location of all buildings, play areas, windbreaks and other mass plantings, in order that the maximum of utility, convenience, comfort and beauty may be obtained.

Long, narrow pieces of land necessitate a different arrangement of features from those that are square or triangular in shape. Irregular-shaped grounds are difficult to develop economically or æsthetically, while those that are square or in the form of broad rectangles offer much better opportunities for a systematic arrangement of all features. Desirable distant views, water supply and sanitation are other important factors that should be considered in connection with orientation when selecting the school site, because they may influence materially the whole design. A site having a warm south or southeast exposure, and a contour which permits of good surface drainage during the rainy season, is generally considered ideal.

Walks and drives are not in themselves very ornamental and good ones are most expensive to construct. They are more or less necessary, in order that the principal features of the grounds may be readily accessible. They may add or detract from the whole design, however, as they are properly or improperly located, or as they approach the extreme in number and width. On small grounds, or when the building is close to the road, one entrance with a straight single or double walk usually looks better and is most serviceable. When the grounds are large and the building is located farther back from the main road, more than one entrance may be required and the road or walk laid out in easy, graceful curves. The number, width and arrangement of walks and drives will depend, of course, upon the location of the features they are to serve and the amount of traffic they will



FLOOR PLAN ELEMENTARY SCHOOL, ALBANY, CAL.
JOHN J. DONOVAN, ARCHITECT

be required to care for. A service drive should be provided and so located as to facilitate the delivery of fuel and other supplies, and to make horse sheds, barns or garden areas easily accessible. Walks and drives are usually too numerous, too wide, and poorly located, with the result that they are very conspicuous and costly features. The principal walk from the road to the building may be from six to ten feet in width. In some cases, however, the architectural lines of the main entrance of the building may require the walk to be wider for the sake of appearance. Minor walks may be from three to five feet, according to the number of children that might be expected to use them at one time. Service drives may be as narrow as eight feet. Ten feet is much better, however, and twelve

ONE OF THE GROUND FLOOR PLAY ROOMS, CLAWSON ELEMENTARY SCHOOL, OAKLAND, CAL.
JOHN J. DONOVAN, ARCHITECT

or fifteen may be necessary under some conditions. It is impossible to establish any definite widths for walks and drives that would meet the requirements of every school. Good judgment has to be exercised in every case and the principal factors of utility and beauty thoroughly considered.

The main walk, and perhaps some others near the building, should be permanently constructed of concrete or brick, in order that they may furnish a clean, solid surface under all weather conditions and be less expensive to maintain. Gravel, crushed rock or dirt walks are never satisfactory and are expensive to maintain in even a reasonable condition. They may be used for the less important walks, however, and for drives and playground surfaces.

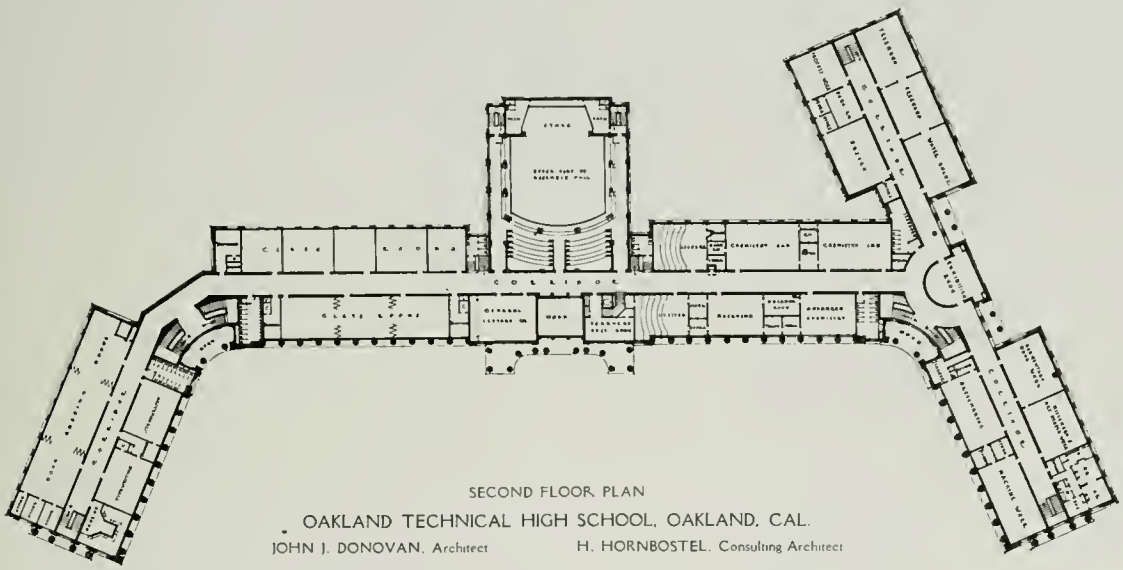
As previously stated, playgrounds are considered an absolute necessity. Children must play, and school grounds should be designed to provide for all the healthy games boys and girls delight in. The boys' play area should contain a baseball diamond, basketball and handball courts, and some kind of a running track, no matter how small, or if nothing more than a straightway. Provisions should also be made for high and broad jumping and, possibly, volleyball. Nowadays girls are indulging in all of the above-mentioned games, but more especially basketball, volleyball and tennis. Therefore, a girls' play area which will provide for these games must be located. The boys' playground is usually the largest, due in part to the greater area required for baseball. It should be separated, nevertheless, from the girls' area by some apparently natural line of demarcation, such as a walk, drive, line of trees, hedge, fence or pergola. Tennis is a very popular game with all children and it is usually advisable to locate one or more courts where either boys or girls may make free use of them. Where there are a number of very small children in the school, a third play area must be located which will contain swings, seesaws, sand-boxes, slides, etc. The location of the various play areas, mentioned above, must be made with due respect to an economic division of the land, protection from severe winds, orientation, supervision, safety, and last, but not least, beauty. In the majority of cases a good dirt surface for play areas will give as much satisfaction as more expensive types, especially if they can be crowned slightly to care for surface drainage during the winter months. Sometimes, however, gravel or fine crushed rock and oil will be found very desirable.

Gardening in different forms is now being taught

in many schools and this work should be provided for where the soil is good and where the area will not be unsightly when not in use. Often a tool house, lath house and frames will be needed, and they should be located in harmony with other surrounding features. The area should be inclosed by a hedge or good wire fence, over which roses and ornamental vines may be grown. This latter recommendation applies to the school property as a whole. A good substantial woven-wire fence, well painted and overgrown with attractive vines, not only adds materially to the appearance of the whole scheme, but protects all interior features as well.

Trees, shrubs, vines, annual and herbaceous plants may now be considered as the necessary ornamental material with which the skeleton of the whole plan is clothed and beautified. Many people have a tendency to think of plants as the whole of landscape, and landscape gardening as that practice which considers only the screening of low objects. They should never be scattered promiscuously as individual specimens over a large area, and should never be planted in regularly defined beds in the center of lawn areas or where they will interfere in any way with general playground features. They also serve as "facings" for tree groups and as "filler material" in windbreaks or larger screen plantings. Vines are useful in covering fences, lunch houses, pergolas and trellises. Even the appearance of the school building may often be improved by some kind of vine growth. Annual and herbaceous plants may be used in shrubbery borders and in many other situations where they will give that trace of color so pleasing to the eye.

It is impossible to enumerate all the uses which different kinds of plants may be put to, the desirable effects they can produce, or the service they can render. They not only possess an æsthetic value, but an economic value as well, which is hard to state in



SECOND FLOOR PLAN
OAKLAND TECHNICAL HIGH SCHOOL, OAKLAND, CAL.
JOHN J. DONOVAN, Architect H. HORNBOSTEL, Consulting Architect

their propagation, planting and care. Landscape gardening in the light of modern thought and practice is an art which seeks to arrange the surface of the land and all elements on the surface for human use, habitation and convenience, and enjoyment, in such a way as to create a beautiful picture or composition, possessing all the economic and æsthetic qualities of an organized whole.

Plants of various kinds, however, are most important elements in the majority of landscapes and more of them should be used in the embellishment of school grounds. Nothing adds more to the beauty or utility of such areas than a good collection of judiciously arranged and well-grown trees and shrubs. Trees may be planted in such a way as not only to frame the school building, but to preserve desirable distant views. They may also serve to check severe winds, screen objectionable views and furnish shade, if needed. Ornamental shrubs in variety may be planted around the base of the school building, at intersections of walks or drives, in out-of-the-way corners, and for the terms of money. Here in California, with such a wide range of climatic and soil conditions, and a most extensive flora, both native and exotic, there is no reason why our school grounds should not be the best developed and the most beautiful of any in America. To accomplish all this, however, each problem has to be studied in a systematic and business-like way, and definite plans prepared in advance.

Plans for the economic and æsthetic development of school grounds are just as essential as architectural plans which govern the design of a building. Without plans, the maximum of utility, convenience, comfort and beauty cannot be obtained in the development of school grounds. Such plans should be prepared even though it may take several years to carry them out in all details. One year the walks and drives may be put in, the next year some of the planting may be done, and so on as finances permit, until at last the completed scheme will be one to be proud of, because everything will have been provided for in the most useful and beautiful way.

THE ARCHITECT

VOL. XIV SAN FRANCISCO, OCTOBER, 1917 NO. 4

Editorial.

NOTHING could illustrate the recent progress of school architecture more clearly than this series of "School Numbers." A few years ago it would have been impossible to collect enough material of merit for even a single issue: even now the examples that are worthy of production are few as compared to the amount of work being done. The former lack of progress was largely the result of conditions peculiar to school architecture, and those primarily responsible are the school officials themselves.

A man of taste usually builds a tasteful house, while a man of stupid ideas and poor taste usually manages to inject that stupidity and lack of taste into the work done for him, even if he accidentally acquires the services of a good architect. However, he is almost certain to select an architect for other reasons than his architectural ability. To him the prattle of the specialist especially appeals, as it deals with things which are within his understanding. This is all as true of the school official as of any other client.

School work has been largely limited to certain self-styled specialists, adepts in the art of handling school officials, but too often of mediocre ability as architects.

Talk of specialism in architecture is usually "bunk" used to bolster up mediocrity. After all, school architecture is architecture, and its problems primarily architectural. Technical details, however essential, are immeasurably less important than beauty of design or logical and well-proportioned planning.

We do not wish to decry experience in school work, but do wish to point out that the mere fact of having done work is not to one's credit. While one failure need not necessarily condemn a man, the fact that he has failed again and again is conclusive proof of incapacity. If, however, his work has been done intelligently and well, then he has proven himself capable of learning the lessons that experience teaches.

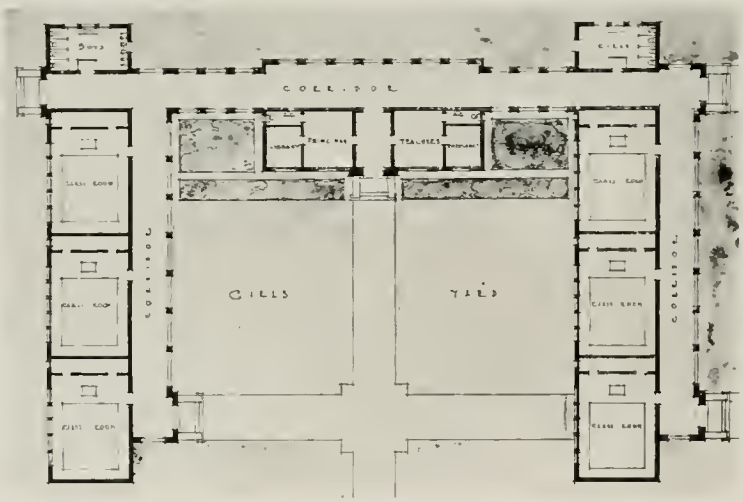
Mr. John J. Donovan, to whose work this issue is largely devoted, is an architect of this latter type. When appointed in charge of the school work of the City of Oakland, he had had no experience as a school architect. He chose as associates in a portion of this first work a number of able architects.

Mr. Donovan was particularly fortunate in that he was able to avail himself of the knowledge of a man who had spent a great many years in directing school work, Mr. McClymonds, Superintendent of Schools of the City of Oakland. With his assistance he quickly mastered the technical requirements necessary to make up the complete and successful school. These requirements are based upon the organization of the school system itself, and form the elements which the architect of ability must use in producing his plan and design.

FRONT ELEVATION

PROPOSED ELEMENTARY SCHOOL FOR SAN LOUIS OBISPO, CAL.

JOHN J DONOVAN ARCHITECT



FLOOR PLAN

Since that time Mr. Donovan has built a large number of successful school buildings. While the results have varied, the sincerity of purpose and endeavor to reach the best architectural result are always apparent.

While we do not consider that he has yet reached the point which he hopes and intends to reach in his work, he is evolving a system of school design that is always bringing him closer to his goal. We wish to emphasize the fact that, while Mr. Donovan has made a close and successful study of the technical details of his problem, he has not allowed these details to come so close to his field of vision as to cut off from view that still more important essential—architecture.

JOHN BAKEWELL, JR.

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It has no feet—rests directly on the floor and is built in the wall.

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The Sierra is built of one piece of Porcelain Enameled Iron Ware. glazed inside and out. It has a beautiful shining white surface.

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The regular minutes of meetings of all Pacific Coast Chapters of the American Institute of Architects are published on this page each month.

San Francisco Chapter, 1881—President, Edgar A. Mathews, 251 Post Street, San Francisco, Cal. Secretary, Morris M. Bruce, Flood Building, San Francisco, Cal. Chairman of Committee on Public Information, William B. Faville, Balboa Building, San Francisco. Chairman of Committee on Competition, William Mooser, Nevada Bank Building, San Francisco. Date of Meetings, third Thursday of every month; Annual, October.

Southern California Chapter, 1894—President, J. E. Allison, 1405 Hibernian Building, Los Angeles, Cal. Secretary, A. R. Walker, 1402 Hibernian Building, Los Angeles, Cal. Chairman of Committee on Information, W. C. Pennell, Wright & Callender Building, Los Angeles. Date of Meetings, second Tuesday; except July and August at Los Angeles.

Oregon Chapter, 1911—President, Joseph Jacobberger, Board of Trade Building, Portland, Ore. Secretary, W. C. Knighton, 307-309 Tilford Building, Portland, Ore. Chairman of Committee on Public Information, Joseph Jacobberber. Date of Meetings, third Thursday of every month at Portland; Annual, October.

Washington State Chapter, 1894—President, Charles H. Bebb, Seattle. First Vice-President, Daniel R. Huntington, Seattle. Second Vice-President, George Gove, Tacoma. Third Vice-President, L. L. Rand, Spokane. Secretary, J. C. Cote, Seattle. Treasurer, Ellsworth P. Storey, Seattle. Counsels: J. H. Schack, J. Stephen and Charles H. Alden. Date of Meetings, first Wednesday, except July, August and September, at Seattle, except one in spring at Tacoma. Annual, November.

The American Institute of Architects—The Octagon, Washington, D. C. Officers for 1917: President, John Lawrence Mauran, St. Louis, Mo.; First Vice-President, C. Grant La Farge, New York City, N. Y.; Second Vice-President, W. R. B. Willcox, 400 Boston Block, Seattle, Wash.; Secretary, Burt L. Fenner, New York City, N. Y.; Treasurer, D. Everett Waid, 1 Madison Ave., New York City, N. Y.

Board of Directors for One Year—Charles A. Coolidge, 122 Ames Building, Boston, Mass.; Charles A. Favrot, 505 Perrin Building, New Orleans, La.; Elmer C. Jensen, 1401 New York Life Building, Chicago, Ill. *For Two Years*—Edwin H. Brown, 716 Fourth Avenue, Minneapolis, Minn.; Ben J. Lubschez, Reliance Building, Kansas City, Mo.; Horace Wells Sellers, 1301 Stephen Girard Building, Philadelphia, Pa. *For Three Years*—William B. Faville, Balboa Building, San Francisco, Cal.; Burt L. Fenner, New York City; Thomas R. Kimball, Omaha, Neb.

Minutes of San Francisco Chapter

The regular monthly meeting of the San Francisco Chapter of the American Institute of Architects was held at Tait's Cafe, 168 O'Farrell Street, on Thursday, September 20, 1917. The meeting was called to order by Mr. Edgar A. Mathews, the President, at 12:30 p. m.

Members present were: John Bakewell, Jr., Morris M. Bruce, Chesley K. Bonestell, Jr., Arthur Brown, A. Reinhold Denke, Charles W. Dickey, W. B. Faville, J. S. Fairweather, August G. Headman, B. S. Hirschfeld, B. J. Joseph, John O. Lofquist, William Mooser, Edgar A. Mathews, Walter H. Parker, Matthew O'Brien, Fred H. Meyer, Smith O'Brien, Sylvain Schnaittacher, Albert Schroepfer, T. Paterson Ross, George Rushforth, G. Alexander Wright.

STANDING COMMITTEES

Board of Directors: No report.

San Francisco Sub-Committee on Competitions: No report.

City Planning: A report was received from Mr. Charles H. Cheney relative to the National City Planning Conference held in Kansas City, May 7, 8, 9, 1917.

Institute Relations: No report.

Commercial Bodies: No report.

Education: No report.

COMMUNICATIONS

From Key-Hold Lath Company regarding amendment to the building laws affecting plasterboard; from E. C. Kemper relative to the resignation of Mr. L. T. Lenzen from membership in the Institute; from E. G. Garden relative to his resignation from the Chapter; from Otto Kleeman relative to the payment of his dues; from State Commission of Immigration and Housing of California thanking the Chapter for its assistance and co-operation in the drafting of the bills and their final enactment into law; from Building Industries, enclosing membership cards to meetings; from the *American Architect* relative to the names of Chapter members who have given their services to the Government in the war; from Willis Polk relative to the State Building Competition.

NEW BUSINESS

Mr. Mooser spoke in reference to Mr. Charles Peter Weeks' letter referring to Mr. Mooser's report on the State Building Competition, which was a personal and not a committee report. There being no further comments, the letter was ordered filed.

It was moved by Mr. Rushforth, and duly seconded, that Mr. Polk's letter asking that the Chapter join in a request to the Governor to reopen the State Building Competition matter be laid on the table. Carried.

It was moved by Mr. Mooser, and seconded, that Mr. Cheney's report of the National City Planning Conference in Kansas City be spread upon the minutes and copies sent to all Chapter members.

Mr. Mathews reported receiving a letter from Frank Miles Day in regard to documents in preparation on professional practice and business administration, which will prove very useful.

It was moved by Mr. Mooser, and seconded, that those members of the Chapter who have entered the Federal service for the war shall be exempt from the payment of Chapter dues during the term of their service.

It was moved and seconded and carried that hereafter the meetings be held in the evening.

It was moved by Mr. Schnaittacher, and seconded, that the Chapter resign its membership in the Civic League of Improvement Clubs on account of the entrance by the latter into the political field.

NOMINATION OF OFFICERS

The following nominations for officers for the ensuing year were made:

Mr. Mooser nominated the present officers for re-election: Mr. Edgar A. Mathews, President; Mr. Sylvain Schnaittacher, Vice-President; Mr. Morris M. Bruce, Secretary.

Mr. Bakewell nominated Mr. Headman for Trustee.

Mr. Meyer nominated Mr. Bakewell for President.

It was moved by Mr. Mooser, and seconded, that the number of Trustees be increased and the nomination and election be conducted in conformity with the new forms of constitution and by-laws being prepared by the Institute.

On motion of Mr. Faville, nominations were declared closed.

ADJOURNMENT

There being no further business before the Chapter, the meeting adjourned at 2:35 p. m.

Subject to approval, Sept. 20, 1917.

MORRIS M. BRUCE, *Secretary.*

Minutes of Southern California Chapter

The one hundred and ninth meeting of the Southern California Chapter of the American Institute of Architects was held at Jahnke's Cafe, on Tuesday, September 11, 1917.

The meeting was called to order by Mr. J. E. Allison, President, at 7:15 p. m.

The following members were present: J. E. Allison, J. C. Austin, J. J. Backus, F. P. Davis, P. A. Eisen, A. M. Edelman, W. E. Erkes, Lyman Farwell, R. C. Farrell, J. C. Hillman, R. G. Hubby, F. D. Hudson, J. P. Krempel, A. C. Martin, S. B. Marston, S. T. Norton, R. H. Orr, A. W. Rea, A. F. Rosenheim, W. J. Saunders, J. T. Vawter, A. R. Walker, August Wackerbarth, H. F. Withey, W. H. Willson.

As the guest of the Chapter was present Mr. W. E. Prine, of the *Southwest Contractor*.

Minutes of the one hundred and seventh and one hundred and eighth meetings were read and approved.

The Treasurer reported a balance of $45.48 in the regular Chapter Fund and $17.77 in the special fund.

The Secretary reported collections made since the last meeting in amount $544, including $250 received from San Francisco.

Collections in the special assessment fund, $25.00.

Disbursements from the regular fund, $492.85, and from the special fund, $19.77.

For the Board of Directors the Secretary reported three meetings held, the principal matter of business at all three meetings being caring temporarily for expenses incurred by the Legislative Committee.

Stucco of new color and texture

The new aggregate-toned stucco gives the architect a fresh medium to work with—or at least a medium with fresh possibilities. This stucco obtains its effects by adding screenings of richly colored granite or marble, or warm-toned sands or gravels to Atlas-White Cement in the finish coat. It is therefore necessarily capable of highly individual treatment with a great variation of color, tone, and texture. The color is permanent and shown in its fullest value by the white non-staining cement.

Our monograph for architects, "Color Tones in Stucco," describes our experiments in aggregate toning; reproduces in full scale and color sample panels of the results, each with its formula; lists some sources of available aggregates; and contains a convenient guide to color stucco specifications. A copy will be mailed to you on request. The Atlas Portland Cement Company, New York or Chicago.

For the Chapter's Committee on Membership, it was reported that Mr. Carleton Monroe Winslow, from the New York Chapter, had been transferred to the Southern California Chapter, and that Mr. R. Germain Hubby had been transferred from the Cleveland Chapter.

For the A. I. A. Sub-Committee on Education, Mr. R. C. Farrell made the suggestion that the architects busy themselves with suggesting proper new books along architectural and allied lines for purchase by the Public Library. This recommendation was made upon the suggestion of Mr Everett R. Perry, City Librarian.

For the Chapter's Committee on City Planning, Mr. Withey reported that further work would be necessary by those interested in the movement in view of the election of practically an entire new City Council.

For the Chapter's Committee on Revision of Constitution and By-Laws, Mr. John P. Krampel announced two meetings held and that a new draft of the Constitution and By-Laws would probably be ready for the coming meeting.

Communications were read as follows:

From William Stanley Parker, advising that the charges made against Mr. Elmer Grey were under investigation by the Institute's Board of Directors.

From William Stanley Parker, notifying of the transfer of membership of Mr. Carleton Monroe Winslow, formerly of the New York Chapter.

From William Stanley Parker, notifying of the transfer of R. Germain Hubby, formerly of the Cleveland Chapter.

From the Southern California Electrical Contractors and Dealers, offering co-operation with Chapter members in the framing of electrical specifications and by resolution requesting Chapter architects to confine the acceptance of bids to members of their Association.

It was moved by Mr. A. C. Martin, duly seconded and carried, that the Secretary communicate with the Southern California Electrical Contractors and Dealers, stating that the Chapter would be unable to bind its members as an organization to such an action and recommending that said Association get in touch with the individual Chapter members.

The President announced the meeting of the Joint Technical Societies on Thursday, September 13th, at which Mr. George Edwin Bergstrom would speak.

Mr. R. Germain Hubby, a new member, following his introduction to the members of the Chapter, was called upon for a short talk.

Under the head of new business, Mr. A. F. Rosenheim brought up for discussion the matter of various forms of alleged advertising indulged in by various Chapter members.

Mr. A. C. Martin offered a defense for those members who believed that many of the methods referred to by Mr. Rosenheim were forms of legitimate publicity.

After general discussion, a vote was taken on the question, particularly with reference to the publication of more or less technical articles referring to works performed, and the Chapter passed a resolution to the effect that such methods were legitimate forms of publicity and not advertising.

After discussion relative to the practice of several newspapers in asking subscriptions for annual numbers, a resolution was offered that the Chapter should recommend to its members that in the future no further donations or subscriptions or gifts to newspapers for annual numbers be tendered by members of the Chapter.

This resolution was further amended to cover instructions to the Secretary that a copy of such resolution be sent to all members.

A vote of thanks was proposed, and adopted, to Mr. A. F. Rosenheim for his further activities in the Chapter's welfare.

The meeting adjourned at 9:40 p. m.

ALBERT R. WALKER, *Secretary.*

Report of the National City Planning Conference

KANSAS CITY, MAY 7-8-9, 1917

By CHARLES HENRY CHENEY, Delegate

I have the honor to submit herewith my report on the proceedings of the Ninth National Conference on City Planning held in Kansas City on May 7, 8 and 9, 1917, which I attended as your delegate. About one hundred and forty delegates were present at the Conference, and most of the important cities in the United States were represented. This convention was declared by its president, Frederick L. Olmsted, to have been the most important and useful one ever held by the Conference. The local newspapers gave much publicity to the work of the convention, and it is interesting to quote from an editorial in the Kansas City *Times* (May 10th):

"A few years ago nobody knew what city planning meant. We all understood that a well-managed business is planned for the future. But we had a notion that a city could grow in a haphazard way and there was no occasion to attempt to direct its growth along rational lines. A city plan was supposed to be merely a civic center about a city hall or courthouse.

"Now we have learned that we were mistaken. We have discovered that we can plan for traffic ways, for industrial additions, for correct housing. Experience has taught us that too wide streets in the residence districts are wasteful. We have found that convenience and beauty and healthfulness are important city assets, and now we are discovering that there are trained men who can help us get these things—not visionaries, but men who have based their work on experience."

LARGE CITIES NOW HAVE PERMANENT COMMISSIONS

It was reported that practically all the large cities of the country, with the exception of San Francisco—in fact, something over two hundred cities in all—have appointed permanent city planning commissions to advise and recommend to the Mayor, City Council or Board of Supervisors, as the case may be, well-thought-out plans and ordinances for zoning the city and for initiating and guiding city development in a business-like way, which politically elected boards find it difficult to do. By making it definitely somebody's business officially to plan and advise, these cities as a result are doing most constructive work, often effecting definite economies on a large scale. They seem to have overcome the continual bickering in each little local district, which fights the improvements of other sections of the city, a matter from which San Francisco has long suffered, as our Mayor and Board of Supervisors can testify.

City planning involves consideration of zoning or districting so as to limit the height and bulk and use of all buildings, the study of railway terminals, traffic ways, street widenings, parks and playgrounds and housing. Mr. Olmsted says that city planning is to show the divergent interests in the city's growth how to pull together for the best use of the natural opportunities of the community.

ZONING OR DISTRICTING OF CITIES

The great importance of zoning or districting of cities was emphasized at practically every session of the Conference. It was evident that the experts present without question regarded it as the first fundamental step. California's progress came in for a great deal of favorable comment, particularly as the decisions of the United States Supreme Court upholding the Los Angeles zone ordinance seemed to be the basis for districting in New York and most of the other cities of the country.

At the special session on zoning, papers on different phases of the subject were read and discussed by Lawson Purdy, of New York City; Charles H. Cheney, of San Francisco; Edward M. Bassett, of New York City; Frank D. Stringham, of Berkeley, and a number of others. Mr. Purdy during his address said:

"Every city contains horrible examples of homes ruined by the intrusion of garages, stores or factories. Every large city in this country has buildings so high that they steal their neighbors' light and air and monopolize the streets. Every one of these buildings is an extra hazardous investment. When its light and air has gone, its tenants go and the rent goes and the mortgagee can have the deed.

"Some of the dearest things of life may not be reasoned in money, but all the advantages of city life and city ownership may be measured by money. Surely the general welfare demands that we shall zone our cities to protect our homes, protect life and protect values."

Mr. Purdy stated that one building which was assessed at $3,900,000, and which was mortgaged for $3,500,000, actually sold for $3,000,000 after its light had been taken away by surrounding high buildings. One twenty-two story building, which rented its floor space at $1.00 per square foot per year so long as it had light and air borrowed from its neighbors, now rents its space for 45 cents per square foot per year, its original tenants having vacated on account of the want of light and air resulting from the construction of new buildings on three sides. The reduction of values below Twenty-fourth Street in New York has been enormous on account of the construction of too high buildings. When the Equitable Insurance Company contemplated the erection of its new building on Broadway, the neighboring buildings got together and offered the company two and one-fourth million dollars if the company would not build above the ninth story; that is to say, they would pay that amount for the light and air above that height. The company asked two and one-half million dollars for that privilege and the project fell through. The company then built its present forty-story building. Economic waste results from such haphazard construction, and there is no doubt but that New York should have long ago adopted an ordinance limiting the height of the buildings to be constructed in any part of the city. In July of last year, New York passed an ordinance covering the entire city in which it has limited the height and bulk of buildings and divided the city into three classifications of uses.

The Berkeley districting plan is much more complete than that of New York in segregating the different uses of buildings most carefully to protect residence districts. As probably more than ninety per cent of the buildings in Berkeley, as in Los Angeles and most other Western cities, are used for single family residences only, the problem out here is to protect that type of building. In New York City, where a very large proportion of the buildings are high, congested apartment buildings, the problem is different. The Berkeley plan makes the formation of districts optional, which evidently would leave open a large area of the city undistricted for many years to come unless the city takes steps to classify the remainder of the city without waiting for the petition of the local residents in each neighborhood. It seemed to be the general opinion of this Conference that it was advisable to district the whole city at once and that Berkeley had best do this immediately to protect its standing in court. The Berkeley and Los Angeles ordinances do not of course establish heights of building districts or area districts as in New York, although the new California State zoning law now directs all California cities to do so.

RAILWAY TERMINALS

George A. Damon, of Pasadena, presented an interesting paper on the subject of "Interurban Passenger Terminals." He showed how important it was that Los Angeles secure better terminals for its suburban trains; that the latter could only successfully compete with the jitney bus when the street cars were not hampered by other traffic in going through the densely populated districts of the city and could operate trains with sufficient speed. Los Angeles should have all of its suburban terminals connected underground so that passengers could pass through the city without their being transferred over the crowded surface thoroughfares.

The chief engineer of the Public Service Railway Corporation of New Jersey showed by lantern slides how Newark, New Jersey, had partially solved its transportation problem by constructing a modern central street car terminal and arranging for the taking on and discharge of passengers upon different levels.

Lawson Purdy told how the electrification of the New York Central Railroad removed the smoke nuisance and added millions of dollars to the value of the property upon the street which lies over the underground portion of the road. The trains are twenty-six feet underground in an open cut, and no vibrations can be felt in the buildings.

Kansas City has an excellent union railroad station where trains of all roads pass through the city with the greatest economy of operation. Station and adjuncts cost approximately $40,000,000, the cost being borne by twelve railroads.

Denver has a modern end-on union station, but trains have to back out, which of course is not the best kind of an arrangement.

A. Pearson Hoover, of New York, read a paper on the subject of "Industrial Terminal and Its Relation to the City Plan." This paper discussed the economic advantage of an industrial terminal, such as the famous Bush Terminal of New York.

PARKS AND PLAYGROUNDS

Mr. Jay Downer, engineer of the Bronx Parkway Commission, in an illustrated lecture demonstrated how the Bronx River for the entire distance from Bronx Park to Croton Dam had been reclaimed from an unsanitary, unsightly watercourse and converted into a beautiful stream bordered by parks and playgrounds, with a driveway along its course, all of which is destined to become the recreation ground of millions of people.

Chicago has found in recent years that many of the smaller children in the city could not use the larger parks, for the reason that they were generally located too far apart and too far from the homes of these children. The city, therefore, recently created a Special Park Commission to study this question. As a partial result of the labors of this commission, Chicago purchased, during the year 1915, forty eight small parks scattered throughout the city.

During the last twenty years, Kansas City (population approximately 250,000) has spent $16,000,000 upon its park and boulevard system, paid for on the district assessment plan. This system is a source of health and much pleasurable enjoyment to that city, and one of which they are justly proud. One of the park commissioners of Kansas City suggested that cities hereafter in their park development provide landing spaces for aeroplanes. City planners generally are recommending that plat playgrounds be required in close vicinity to school buildings. In certain parts of New York, traffic is excluded from some of the streets during a portion of the day, in order that children may have a place to play.

TRAFFIC WAYS

The increased traffic resulting from the introduction of motor cars presents a most serious problem. In some instances the only remedy is to cut through new streets or to widen existing streets. Mr. Nelson P. Lewis pointed out that there are four ways of meeting this necessity:

1. The setting back of the curb.
2. The actual widening of a street by purchase of land.
3. Requiring new buildings to be set back from the property line, the city acquiring an easement until such time as it may wish to acquire the fee.
4. Putting the sidewalks under arcades, the city acquiring an easement for that purpose through the ground floor of existing buildings which are remodeled to include the arcade.

The second method, which is the most efficient, is, of course, the most expensive. When the right to excess condemnation is once clearly established, the expense to cities of widening streets would be reduced. We shall have an opportunity to vote on a constitutional amendment granting cities this power in California at our next general election.

In the last ten years, Chicago widened Michigan Avenue at an expense of about $8,000,000 and widened Twelfth Street an expense of $4,000,000.

New York has recently widened, or is now widening, two streets at a total expense of about $5,000,000 each. Mr. Lewis gave one illustration where an owner received in damages for the taking of land for the widening of the street a sum equal to what he had paid for the property, and the owner then sold the remaining portion of his lot for a sum equal to the damages paid, and this same owner had protested against the amount of damages which he had been allowed.

Mr. Hill, city engineer of Kansas City, urged the separation of the light, fast-moving vehicular traffic from the slower and heavier vehicles. Traffic ways must form a complete system, and if they are not in the direct flow of business upon easy grades, they fail of their functions. Traffic is sure to follow the line of least resistance. It will go out of its way to avoid a bad road or a grade. There is no doubt but that a great deal has been accomplished by merely making traffic rules and regulations. A tremendous amount of traffic can be taken care of when well handled. This is well illustrated by the intensive use made of the Great White Road to Verdun during the time of the German assault in February. All refugees and all of the munition supplies and ambulances to take care of the force of 800,000 men had to pass over this road. Over 30,000 passed one point of this road in one day, counting the vehicles going in both directions. If any one vehicle became disabled, it had to be immediately thrown out of line.

CITY PLANNING

Most of our cities have not been scientifically planned and there is a common misconception that city planning and the city beautiful are synonymous terms. I quote Mr. McFarland:

"There are people who imagine that city planning consists of covering lamp posts with wriggling dolphins and ornamenting buildings with bunches of grapes and flowers tied with impossible stone ribbons. Some cities have been built with this idea. Most of them look like a man in evening dress to his waist and with overalls the rest of the way down. A city plan has to be either right or wrong. Pompeii, Babylon and the most ancient of cities had their city plans.

"There is one city planning crown of which we can always boast. It is the national capital. It was designed for a national capital by the man for whom it was named. At a time when the colonists were hanging onto a strip of the Atlantic Coast by their eyebrows, George Washington planned a city for future years. All cities should be planned in this way for a purpose and for the future."

Mr. Charles E. Merriam, former alderman of Chicago, well expressed the purpose of city planning:

"City planning is city conservation. It is the same work on a small scale as national conservation is on a larger. We may measure our gains in square feet of land. We may appraise them in dollars and cents. We may chronicle them by the clock in terms of transportation time. We may gauge them by the reduction in the grim reaper's toll of death and the sweeping ravages of disease. But we cannot measure by rule, scale, compass or computer the precious human values, the warmth and brightness of more abundant life, the happiness and joy of larger living, those personal values which transcend all others, and whose protection and promotion are the supreme end of government."

I have the honor to report my election to the Board of Governors of the American City Planning Institute, newly organized at this Conference to increase the efficiency and service of the country's trained city planners for the benefit of the cities which employ them.

Respectfully submitted.

CHAS. H. CHENEY, *Delegate.*

School Buildings of St. Louis, Mo.

(Continued from page 253)

brick lined rooms; shower baths and dressing booths are provided to accommodate relays of twenty to thirty pupils, who take their baths under the supervision of an attendant.

The mechanical equipment of the building includes a steam plenum system of heating and ventilation, with temperature and humidity control, the air being washed and purified before entering the rooms. The heating is entirely indirect, and the ventilation is based upon nine air changes per hour in class rooms and four changes per hour in corridors. The building is wired and fitted complete with electric fixtures, the light distribution at the desk level being figured upon the basis of three foot candles, except for special rooms, where a greater quantity of light is desired.

A synchronizing clock and bell system, a house telephone system between the principal rooms, and a mechanical cleaning system complete the equipment.

The buildings are of fireproof construction throughout, except in the cases of buildings with pitched roofs, in which event the roof is of mill construction over the fireproof ceiling of the upper story.

The finish of the buildings is generally of oak, the floors are maple, and the walls and ceilings are painted in lead and oil upon hard wall plaster.

The cost of these buildings complete, ready for their equipment of school furniture, and including the improvement of the school grounds, paving, fencing, etc., averages eighteen cents per cubic foot.

ARCHITECTS' REFERENCE INDEX

Containing List of Manufacturers, Their Representatives and Serviceable Literature

ASBESTOS BUILDING LUMBER
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Illustrated and descriptive pamphlet, 7¾x10¾, 8 pp. Pamphlet, 4x8½, 8 pp. Price list, 3½x6¼. Literature of various sizes, samples, etc. "Service Sheets," working drawings, details of application, size 16½x21½.

ASBESTOS CORRUGATED SHEATHING
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Descriptive catalogue, 5¼x8¼, 24 pp. Catalogue of details and specifications for application of roofing and siding, size 8½x11, 40 pp. Lists of buildings covered. Price lists, 3½x6¼, 6 pp., and literature of various sizes, samples, etc. "Service Sheets," working drawings, details of application, size 16½x21½.

ASBESTOS SHINGLES
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Illustrated catalogue. Detail specifications, 8x10, 20 pp. Descriptive catalogue, various types of roof covering, 5¼x8¼. Various pamphlets, 3¾x6. Current price lists, 3½x6¼, 6 pp. Lists of buildings and literature, various sizes, samples, etc. "Service Sheets," working drawings. Detail of application, size 16½x21½.

BRICK, ENAMELED
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Catalogue and various literature.
Los Angeles Pressed Brick Co., Frost Bldg., Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Catalogue on "Enameled Brick for Facing," illustrating and listing names of prominent buildings finished with Enameled Brick. 5x7½, 48 pp.

BRICK, FIRE AND REFRACTORIES
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Henry Cowell Lime & Cement Co., 2 Market Street, San Francisco, Cal.
Imported and domestic brands.
Catalogues and various literature.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Bldg., Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Descriptive catalogue, 5x7, 54 pp.

BRICK, PRESSED
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Catalogues and various literature.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Bldg., Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Moulded and Ornamental Pressed Brick. General catalogue. 5x7, 54 pp.

BRICK, PAVING
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.

CEMENT, PORTLAND
Atlas Portland Cement Company, The, 30 Broad St., New York.
(Western Representatives, see advertisement.)
Building a Bungalow. Addressed to owners. Booklet 8x10½ 14 pp, with 4 insert plates.
Choosing the Garage. Describing actual construction. Booklet. 8x10½ in. 26 pp.
"Color Tones in Stucco," a booklet of 20 pages and cover, in full colors. Size 8½x11 in.
Commercial Garages. With construction notes and architectural treatment. Booklet 8x10½ in. 12 pp.
Early Stucco Houses. With modern stucco specifications. Booklet. 8½x11 in. 24 pp.
Guide to Good Stucco. Addressed to contractors. Booklet. 8½x11. 20 pp.
Handbook and Treatise. Concrete in factory construction. 6½x8¾ in. 250 pp.
Information for Home Builders. Addressed to owners. Booklet. 8½x10¾. With 8 insert plates.
Henry Cowell Lime & Cement Co., 2 Market Street, San Francisco.
Cowell Portland Cement Co., Cowell, Cal.
Mt. Diablo Brand especially adapted for cementing oil wells. Literature and pamphlet supplies on request as furnished by the Portland Cement Association.
Santa Cruz Portland Cement Co., Crocker Bldg., San Francisco.
Standard Portland Cement Co., Crocker Bldg., San Francisco, Cal.
Bulletin 12 pp. Size 6x9; also furnish bulletins and specifications for various classes of work requiring Portland Cement.

ELECTRICAL EQUIPMENT
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Descriptive Pamphlet, 3½x6. 12 pp. Descriptive, 4x8½. 8 pp. "Service Sheets" working drawings. Detail of application. 16½x21½.

ELEVATORS
Otis Elevator Co., Eleventh Avenue and 26th Street, New York.
Otis Elevator Co., 2300 Stockton Street, San Francisco, Cal. Offices in all principal Coast cities.
Otis Electric Traction Elevators. Bulletin. 6x9 in. 28 pp.

ESCALATORS
Otis Elevator Co., Eleventh Avenue and 26th Street, New York.
Otis Elevator Co., 2300 Stockton Street, San Francisco, Cal. Offices in all principal Coast cities.
Otis Escalators. Bulletin. 6x9 in. 36 pp.

GARDEN POTTERY AND FURNITURE
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NOVEMBER 1917

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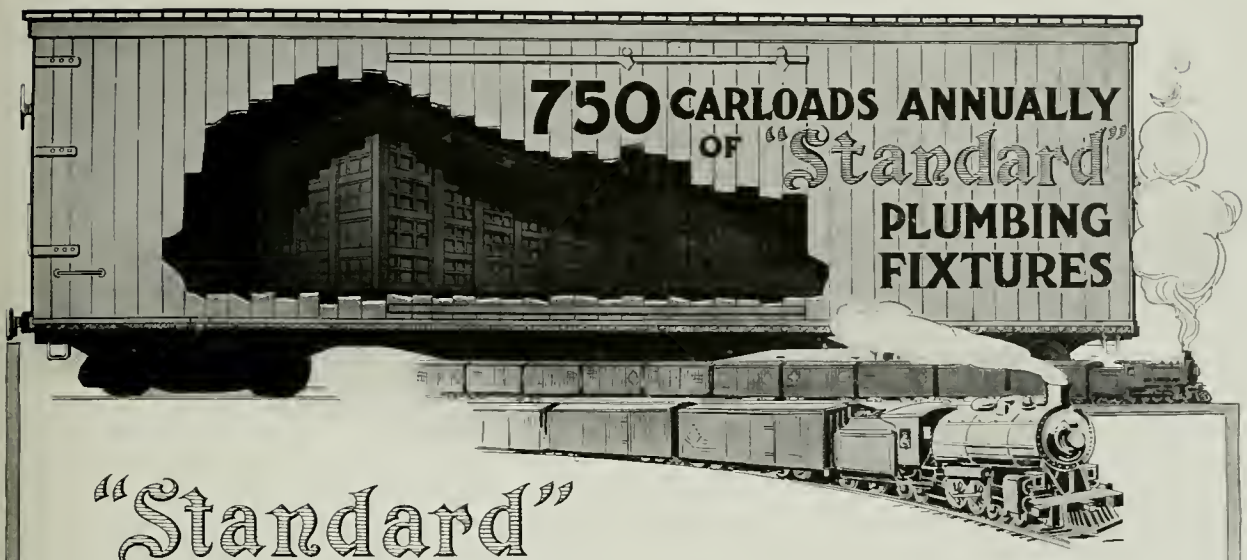

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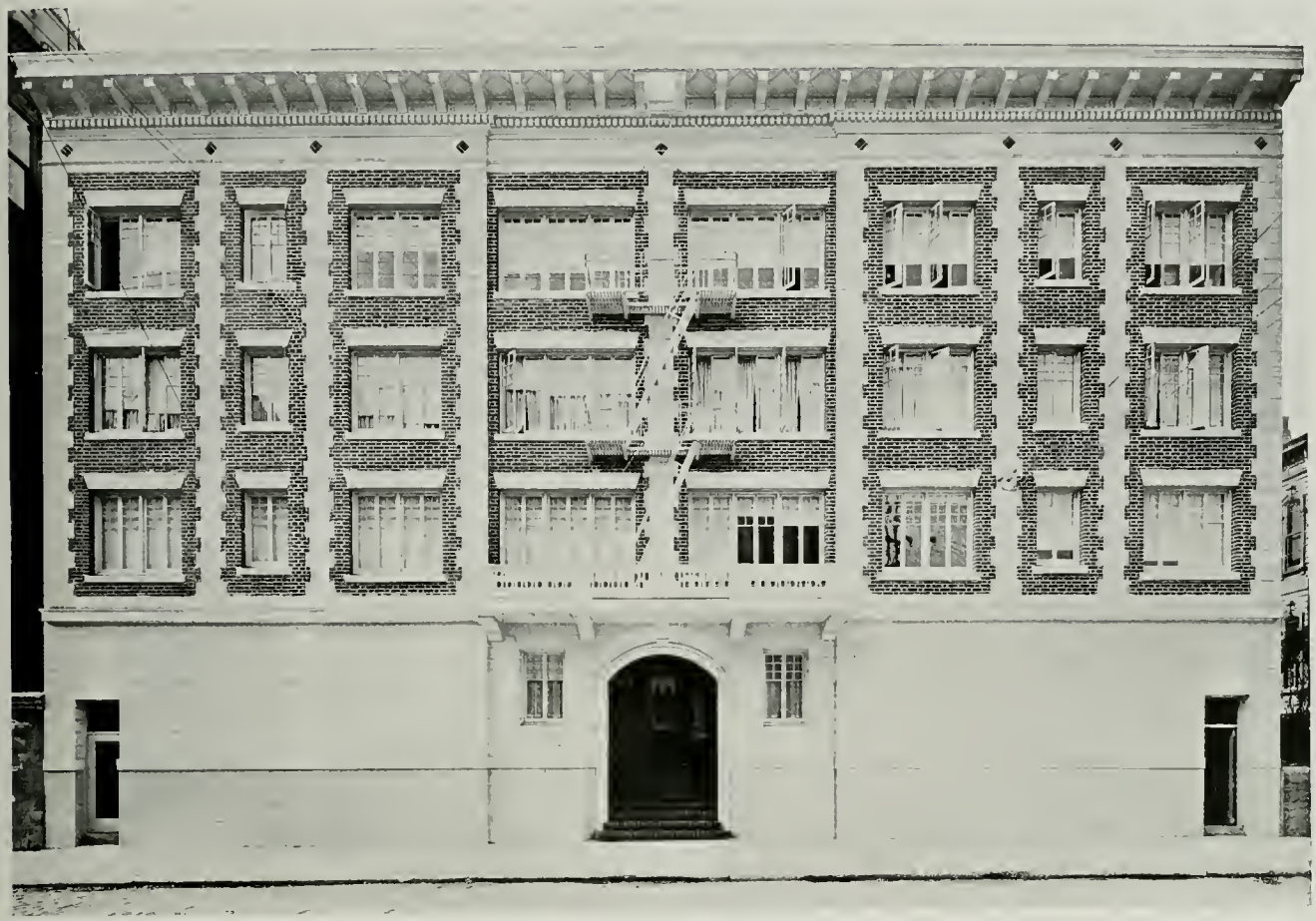

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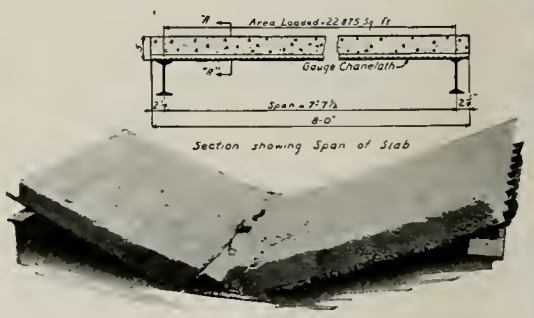

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METAL is an essential in constructing roofs of every description. For example, that part called the "valley," coming where two slopes join, must be very substantial—since it carries off as much rain and melting snow as both slopes. This is, of course, understood by manufacturers of all kinds of roofing materials, and, almost without exception, all roofs have metal valleys. "Gussets," employed to carry water from behind a skylight, trap-door or other projection, are likewise made of metal. And so with "flashings," used at the base of chimneys or where the roof terminates against a wall or turret.

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Vol. XIV. No. 5

THE ARCHITECT

Published by
THE ARCHITECT PRESS

Associate Editors for November, 1917
GEORGE W KELHAM - San Francisco
H G SIMPSON - San Francisco
PAUL E DENIVELLE - San Francisco

HARRIS ALLEN
EDITOR

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¶ Published in the interest of the architectural profession, on the first of each month, at 245 Mission Street, San Francisco. Entered as second class matter August 4, 1911. Subscription price in the United States and possessions, $5.00 a year; foreign and Canadian, $6.00 a year. Single copies, $1.00 each.

¶ Changes in, or copy for new advertisements, must reach the office of publication not later than the fifteenth of the month preceding issue. Advertising rates and any other information will gladly be given on application.

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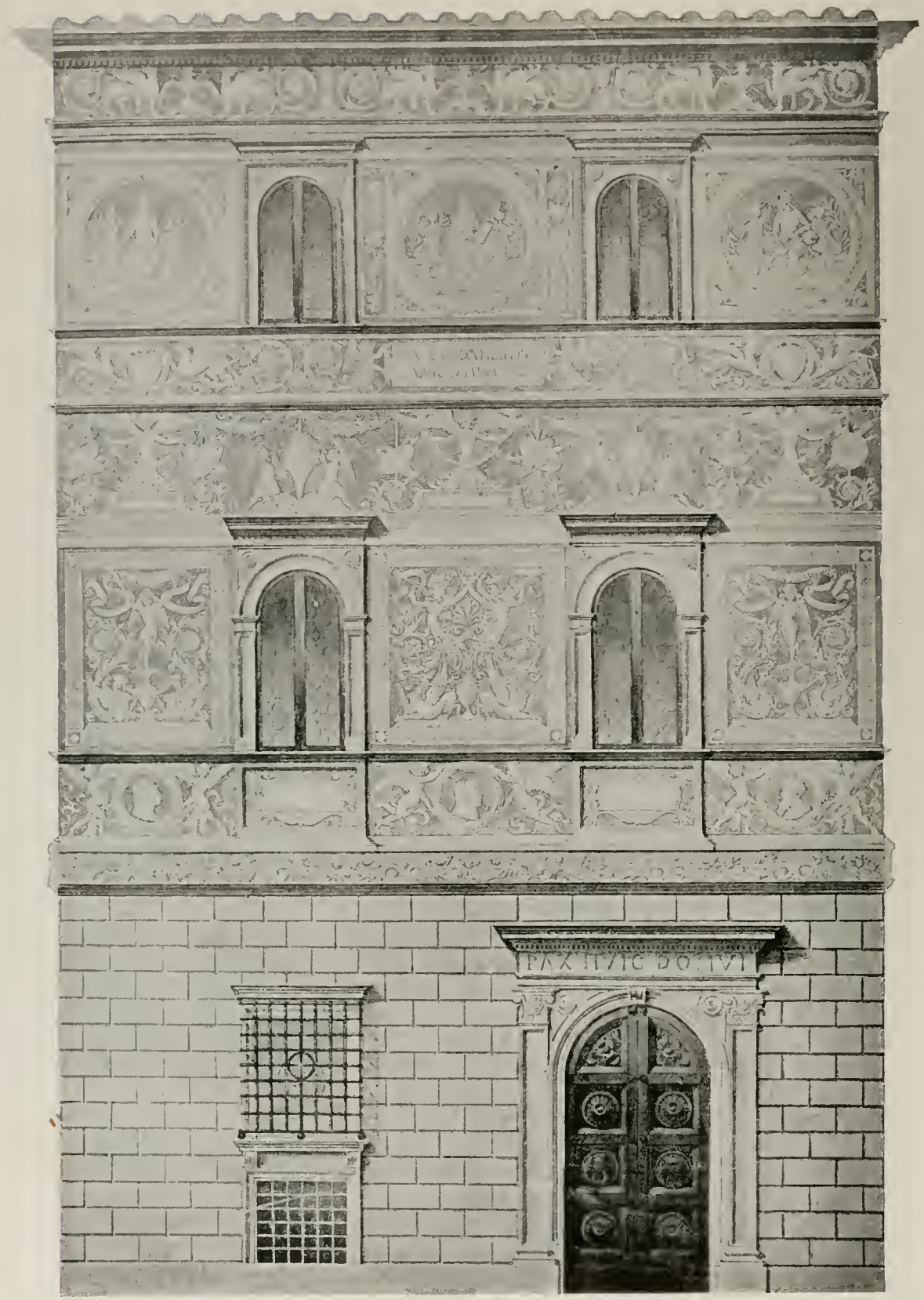


FACADE IN SGRAFFITO OF THE MUSEUM (ARTISTIC-INDUSTRIAL) OF ROME

STYLE PREVAILING AT THE END OF THE FIFTEENTH CENTURY

THE ARCHITECT

VOL. XIV. SAN FRANCISCO, NOVEMBER, 1917 NO. 5

One of Ten Typical Three-Color Sgraffito Panels in Main Facade, Hilgard Hall, University of California

Sgraffito

Its Future Possibilities in the Higher Development of the Cement Structure. Its Probable Pitfalls While Developing. Its Use, Mis-Use and Abuse.

By PAUL E. DENIVELLE, Supervisor of Texture and Modeling, P. P. I. E.

SGRAFFITO, Graffito, or Graffio (the use of scratches or scoring to produce decorative designs or effects) is an art older than the proverbial hills. Originating with the caveman's scored, primitive, illustrative symbols, and passing in an evolution of development through the Egyptian, Assyrian, Etruscan, Greek and Roman periods, it has been the principal medium by means of which we are enabled today to learn, not only the history and customs, but also gauge the degree of civilization and artistic development of some of the nations where it was in vogue. Indeed, should we eliminate all sgraffito examples from the Etruscan period, for instance, this interesting people becomes almost non-existent, measured by artistic standards. Of the two forms of its use, pottery and mobile objects, and for architectural enhancement, the best examples handed down to us from these early periods of man's striving for artistic expression in combined color and design, those pertaining to pottery alone have a high artistic merit in the earlier types, probably due to the potter's ability to make the materials imperishable, thereby preserving numerous examples for our enjoyment and analysis. Of the architectural, or immobile, type of sgraffito examples, there are not many extant that retain enough of their color value in proper proportion of the balanced values of color to design.

The Pompeiian era undoubtedly developed the most

Northwest Balcony Showing Sgraffito Panels and Pilasters, Hilgard Hall, University of California

flourishing activity in this form of decorative art as a purely architectural form of enrichment, and combined it with fresco painting successfully. In Italy today we know it is still utilized extensively for embellishing structures with success, both in ceramic form and the cementitious, or direct plastic application.

Why has not American ingenuity provided to date more examples of merit in this field of endeavor? Probably for three distinct reasons: First, that in ceramics the use of color glazes generally is limited both as to range of color and the accurate control thereof, and the glazing eliminates the valued texture; besides which, the color outlining is apt to spread; second, that in the cementitious, or direct plastic application of sgraffito to building surface, the difficulty of co-ordinating the different elements that make for complete success in expression of design, color and (most important) for durability, have limited most efforts heretofore to extremely simple forms; third, that the applying of the latter form of the two mediums aforesaid in a strictly architectural way really involves a great percentage of visualized anticipation, or foresight, together with considerable mechanical ingenuity, and because a single slip will land an otherwise creditable creation on the rocks of disaster, supplanting enhancement with grotesqueness, and proportion with abortion. This is not intended to apply in criticism of the frequently successful use of touches of color in ceramics to relieve a facade by slightly accenting certain of its features, but

Southeast Balcony, with Sgraffito Borders, Jambs and Pilasters, Hilgard Hall, University of California.
JOHN GALEN HOWARD Architect

rather where an extensive use of plastic sgraffito in ornate design is intended to play a large, comprehensive part of a monumental structure.

It would, therefore, seem at first blush that, even granting the bridging of mechanical difficulties, there remains the probability that the contemplation of an extensive use of plastic sgraffito to a facade or facades appears axiomatically disastrous to the reputation of the architect bold enough to undertake it.

This article, with its illustrations, is aimed, nevertheless, to prove that artistic results of the highest order are possible through the medium of sgraffito directly applied to facades, either in very simple or very ornate forms, and without limitation, providing the scheme has been properly visualized beforehand and that each step afterwards is based on practical knowledge rather than theory. This would not mean the primitive scratching or scoring process defined as sgraffito at the head of this article, with its papery silhouette that would doom it to an early grave of buried hopes. But a blending of several colors is referred to, each an integral part of the materials themselves. It means the highest type of modeling in colors, applied over each other in extremely thin layers, with the design modeled in, with all variations of light and shade present without relief or sinkage beyond that which might be defined as merely sympathetic texture of the surface itself. It provides a type of embellishment with greater distance visibility, and yet, if properly conceived and understood as to color, design, execution thereof, and the interlocking value that one bears to the other, and each to the whole, the result will not seem in the least bizarre or lose the all-essential sense of fitness. For example, we may look forward to a monumental structure, the main facade, or all the facades, of which would be conceived with all the important architectural features thereof expressed in color by this means, interwoven with the sculpture and ornament, thereby supplanting the ordinary method of treatment (rather than being an incident thereto). As if the structure had been designed by a master architect with the palette instead of the T-square.

The architectural sgraffito craftsman in Italy obtains light and shade variations usually by applying fresco painting to the silhouetted design of two or more colors. This has a degree of permanency in that climate, because of the nature of the materials composing the colored layers of their sgraffito. Our information is that they use for the latter a putty made from a special lime, produced from certain travertin formations that, after slaking, has been buried deep underground for periods from ten to fifteen years and over. This

Typical Main Pilasters Showing Sgraffito Detail, Hilgard Hall, University of California

Main Entrance Detail with Sgraffito Frieze Above and Symbol Panels, Etc., Hilgard Hall, University of California

Jamb Detail of Main Entrance Showing Sgraffito Treatment, Hilgard Hall, University of California

Northeast Balcony and Entrance with Sgraffito Borders and Reveals. Hilgard Hall, University of California

putty, used at once after its exhumation, crystallizes slowly, remaining in a soft, plastic consistency several days during the artist's or artisan's manipulation, looking to the result desired. The natural cement from Pozzuoli is also used as a medium for this purpose. When transported, however, these materials have failed to give equal satisfaction in other climates, apparently undergoing certain chemical changes before they could be used. To our knowledge, up to recently no other satisfactory substitutes have been found for the said materials for this purpose.

The 1915 Panama-Pacific International Exposition was probably the greatest and most universally accepted exponent of extensive and intensive use of color on so large a scale, combined with a distinctive texture, for interpreting elaborate monumental architecture and for relieving plain wall treatment. As a departure from the usual, this feature was probably admittedly the most daring as well as the most extravagant endeavor in this direction ever attempted. True, it was all of a temporary or non-permanent nature as to materials, permitting the use of a gypsum base for the finishing of all exterior walls, etc., thereby making the problem of color and texture aimed at far simpler of satisfactory solution. The writer has since frequently been asked, and here answers the question, whether the said temporary results achieved in color and texture that prevailed at the P. P. I. E. could have been obtained if said work was intended to be permanent, and in the same scale? To any who still doubt, I would state with all positiveness that it is but a matter of additional cost in labor and

Typical Detail of Main Facade Showing Extensive Sgraffito Treatment. Hilgard Hall, University of California

material, plus an ability to co-ordinate more difficult artistry of manipulation in workmanship, materials and intelligent control thereof. The bridging of these separately important factors would provide a result not merely equal as to appearance, but of superior quality and degree of finesse in result.

The cement-finished facade of today seems to have reached an impasse of architectural expression. Indeed, its tolerance seems largely, if not entirely, based on its low comparative cost, or, at best, because permitting more enrichment for less money. This cheapness as motive is really the basic raison d'etre that today prevents the conception of monumental buildings in cement from evolving to this superior and more flexible means of developing the architect's ambition in design. Obstacles, several in number, combine to prevent a revised viewpoint. For instance, every

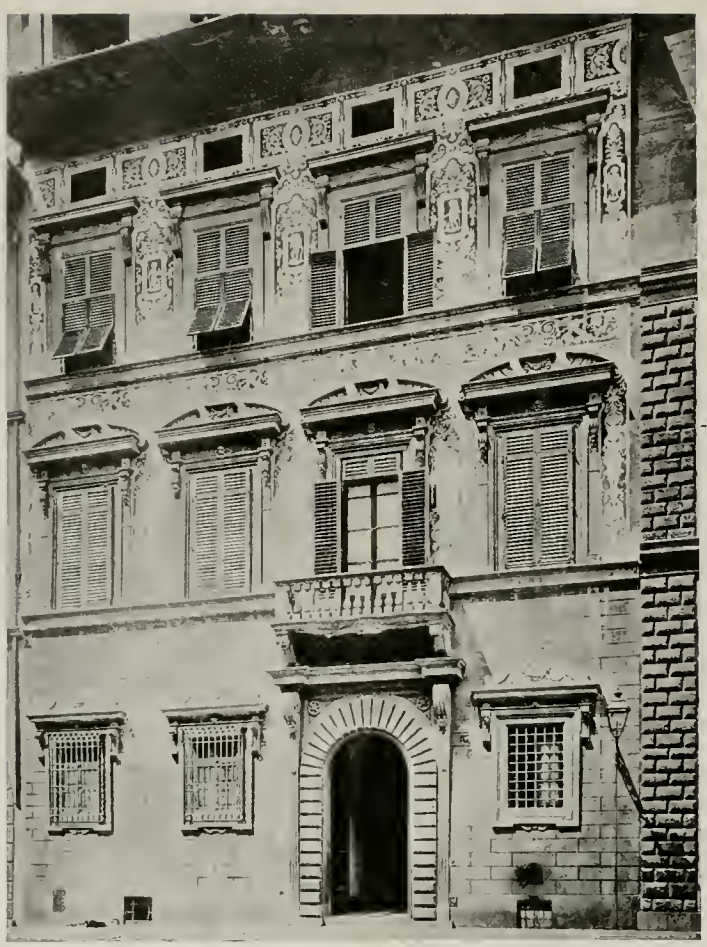
Southeast Balcony Detail with Sgraffito Treatment to Border and Reveals, Hilgard Hall, University of California

East Middle Entrance and Balcony Showing Sgraffito in Jambs and Borders, Hilgard Hall, University of California

manufacturer of white and ordinary Portland is naturally more interested in the extensive use of his product rather than its perfect or more artistic use; hence, needs of competition lead his endeavors toward output quantity and economy, rather than to the perfect hydraulic product, that would not have the slightest after-volume change. Even did he attain the latter objective, our present cost-competitive system is not conducive to the encouragement of the consumer-contractor to put forth all efforts to its use only under ideal conditions. Lastly, the architect's prerogative does not go beyond having even his art-in-architecture let by contract to the lowest bidder (despite a clause to the contrary generally provided in most specifications). Because of these conditions,

many failures must result in order to pave the way to each successful attempt in combined color and texture to permanent buildings of this nature. We must meanwhile be satisfied with an occasional improved exception to the rule.

Hilgard Hall, at the University of California, may, perhaps, modestly lay claim to distinction in the category of exceptions. In view of the foregoing described elements of uncertainty that were to be encountered, Mr. John Galen Howard's temerity and courage in so extensive a use of a new sgraffito to aid the interpretation of his design for so important a unit of the justly famed university group must be regarded as commendable, to say the least. As to the merit, success, importance, etc., of the part played by a so-called innovation in this instance, the reader must judge for himself at the site, as photographic illustrations naturally will not convey balanced values where color is concerned. The work might be described as of three types, two of which are in two colors, and one in three. The prevailing type has a Tuscan red ground, with creamy face, for the main pilasters, friezes, borders, etc. Where used in reveals or soffits, a gray ground was adapted exclusively. The ten symbolized decorative panels between columns of main facade are of the three-color variety, with a gray interposed between the Tuscan red ground and creamy face coat. It is the writer's belief that the blending and shading method of the different colored materials, while soft and plastic, to the extent that prevails in the sgraffito of Hilgard Hall, is a refinement new to work of this kind, in that no fresco process, painting,



Palazzo Torrigiani, Florence. Italian Palace with Sgraffito Decoration

(Continued on page 337)

Rear Elevation of Hilgard Hall, University of California
JOHN GALEN HOWARD, Architect

CENTRAL PORTION MAIN FACADE HILGARD HALL, AGRICULTURAL GROUP, UNIVERSITY OF CALIFORNIA

JOHN GALEN HOWARD, ARCHITECT

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DETAIL OF UPPER STORIES

TICKET OFFICES

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ENTRANCE LOBBY TO OFFICES, SANTA FE BUILDING, SAN FRANCISCO
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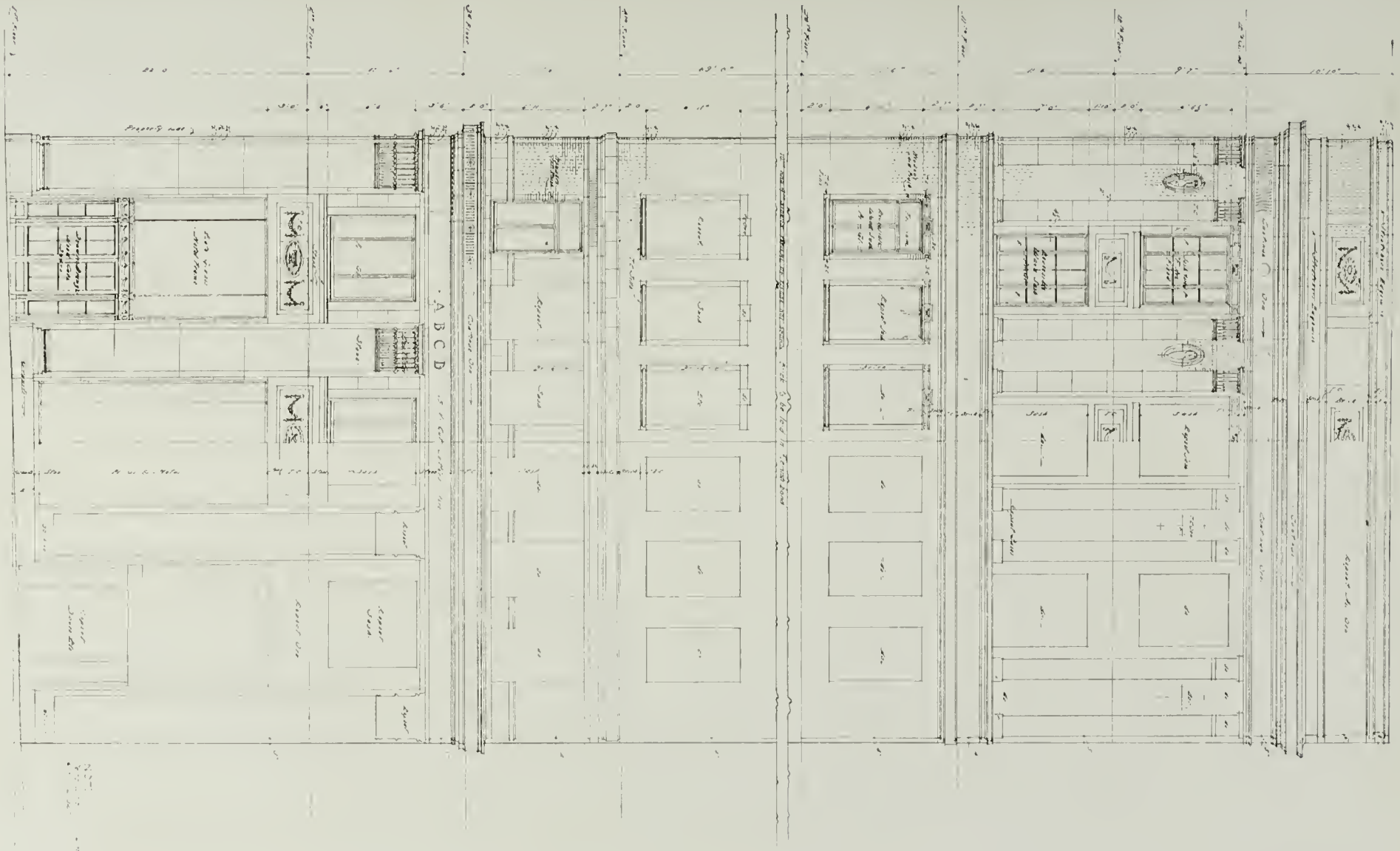

MARKET STREET ELEVATION, SANTA FE BUILDING, SAN FRANCISCO
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COMPETITION ANNOUNCEMENT

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That a Competition has been instituted for the selection of an Architect to design and supervise the construction of State Buildings to be located in the City of Sacramento, California for the construction, equipment and furnishing of which the people of the State of California have voted $3.000.000.00 in bonds, the site having been donated by the City of Sacramento.

Under the law, the State Architect shall act as architectural advisor in connection with the Competition.

This Competition will be conducted in two stages.

The first stage is open to all Architects, citizens of the United States, who have had the necessary experience, subject to the conditions prescribed in the Program of the Competition.

The second stage will be open to eight Architects selected by the Jury from those competing in the first stage.

No Competitor shall receive any remuneration unless chosen by the Jury and submitting drawings in the second stage.

The Program for this Competition is approved by the San Francisco Sub-Committee on Competitions of the American Institute of Architects.

Architects desiring to compete must file with George B. McDougall, State Architect, Forum Building, Sacramento, California, a written request for a copy of the Program. On December 15, 1917, copies will be mailed simultaneously to all Architects from whom written requests for same have been received. Copies will be mailed to Architects making written requests for same after December 15, 1917, at the time of the receipt of such later requests.

(Signed) BOARD OF CONTROL OF THE STATE OF CALIFORNIA.

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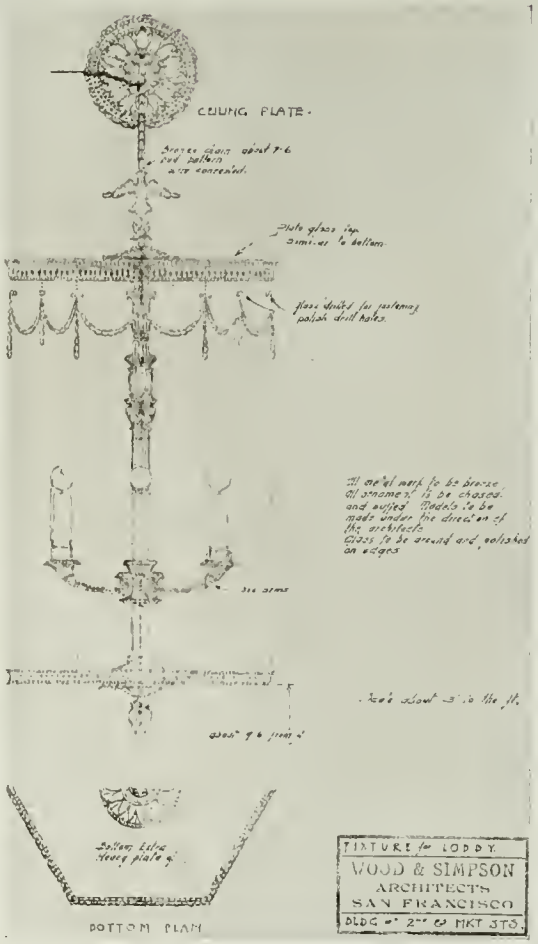
Dated: November 1, 1917.


CEILING PLATE.
Bronze rosette about 9'-6" from bottom and centered.
Plate glass top 3 mm. at 6" bottom.
Place dashes for fastening polish drill holes.
All metal work to be bronze. All ornament to be chased and buffed. Models to be made under the direction of the architects. Glass to be ground and polished on edges.
Scale about 3" to the ft.
Ceiling Line
Ceiling plate
BOTTOM PLAN
FIXTURE for LOBBY
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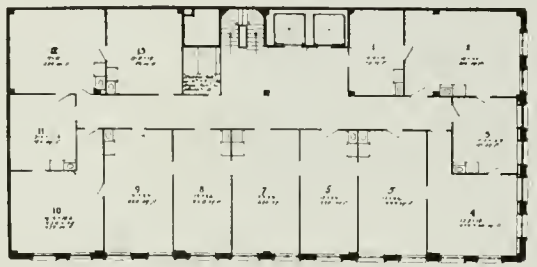
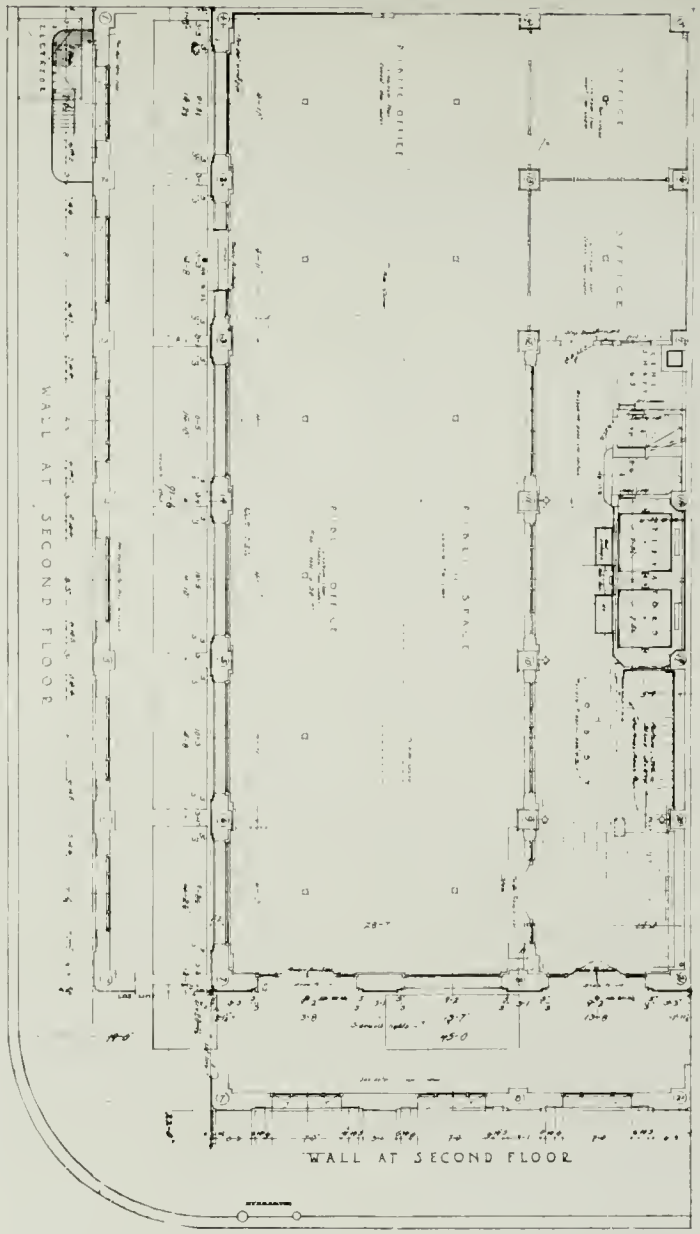
BLDG at 2nd & MKT STS.

FIXTURE FOR LOBBY

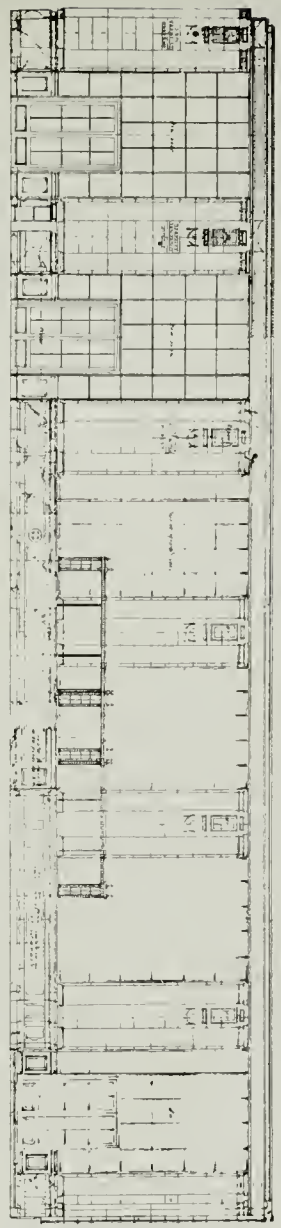


TYPICAL FLOOR

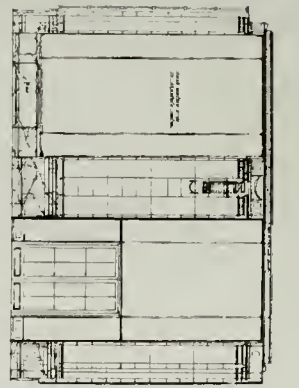
FIRST AND SECOND FLOOR PLANS



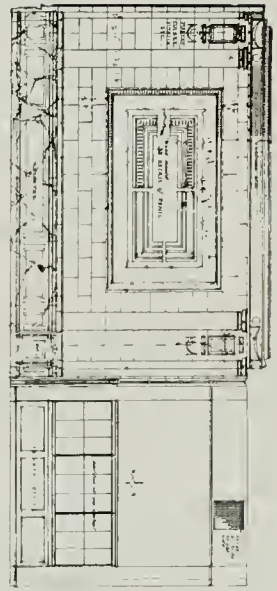
WEST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION



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DETAIL OF LOWER STORIES, FARMERS AND MERCHANTS BANK, STOCKTON, CAL.
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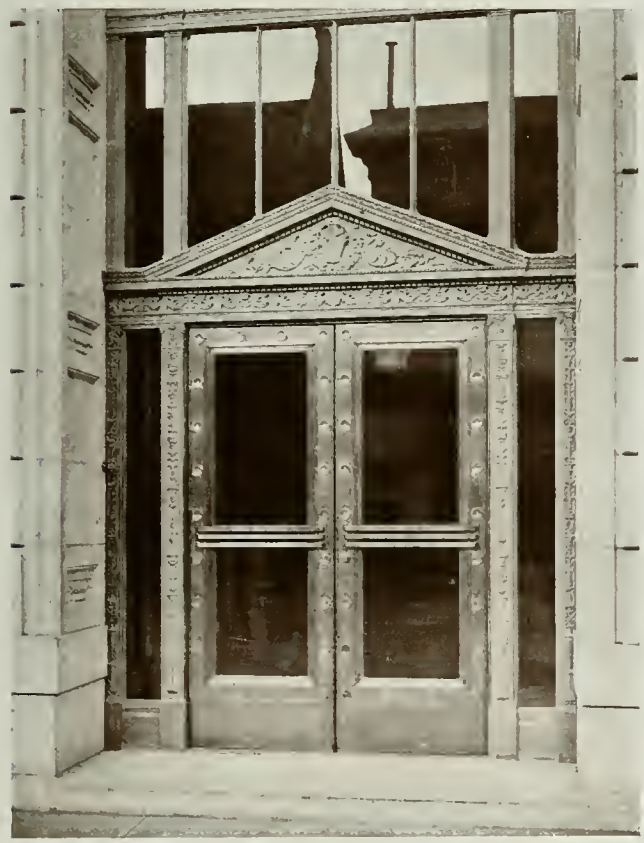
OFFICERS' PLATFORM



DETAIL ENTRANCE TO OFFICES

DETAIL ENTRANCE TO BANK

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GEORGE W KELHAM, ARCHITECT

BANK SCREEN

DETAIL OF ELEVATOR DOOR

DETAIL OF BANK SCREEN

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ELEVATOR LOBBY

BANKING ROOM

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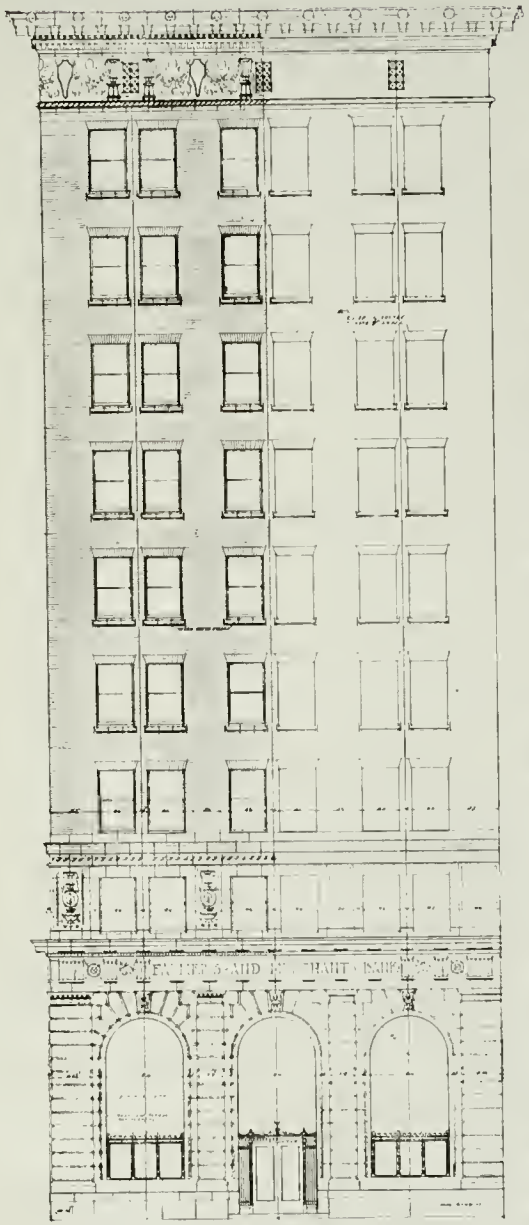
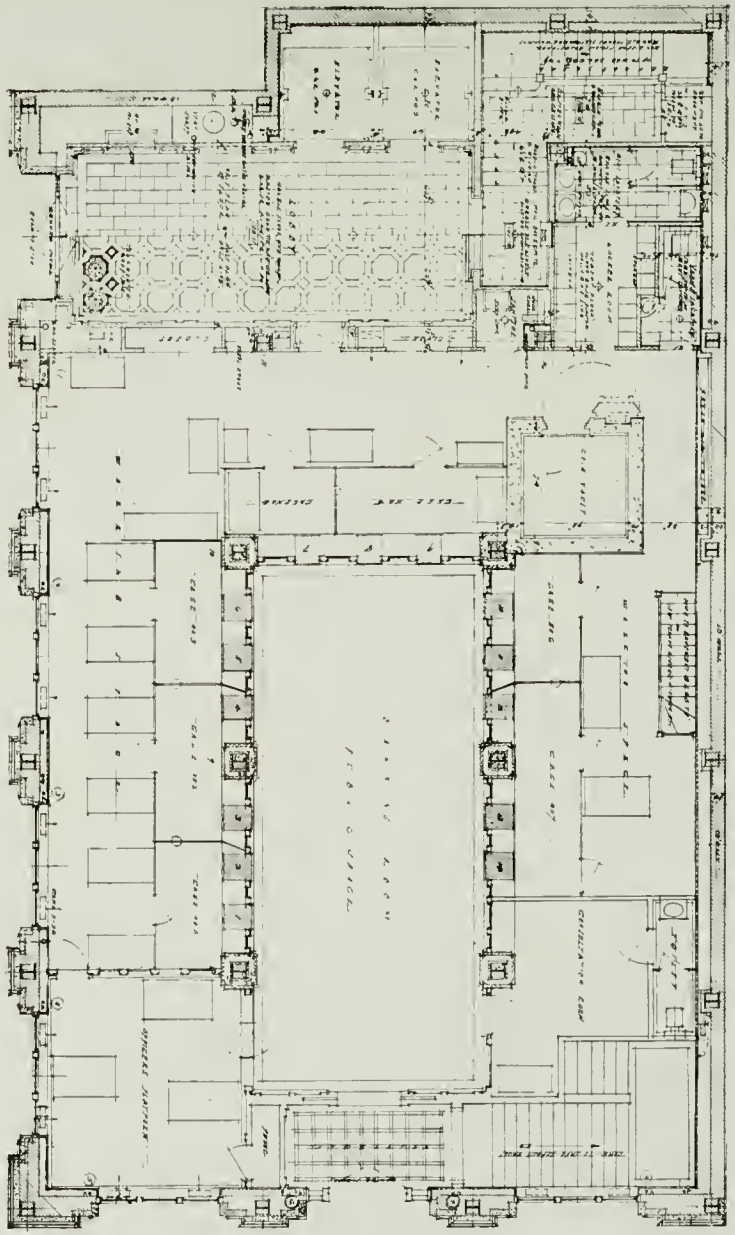
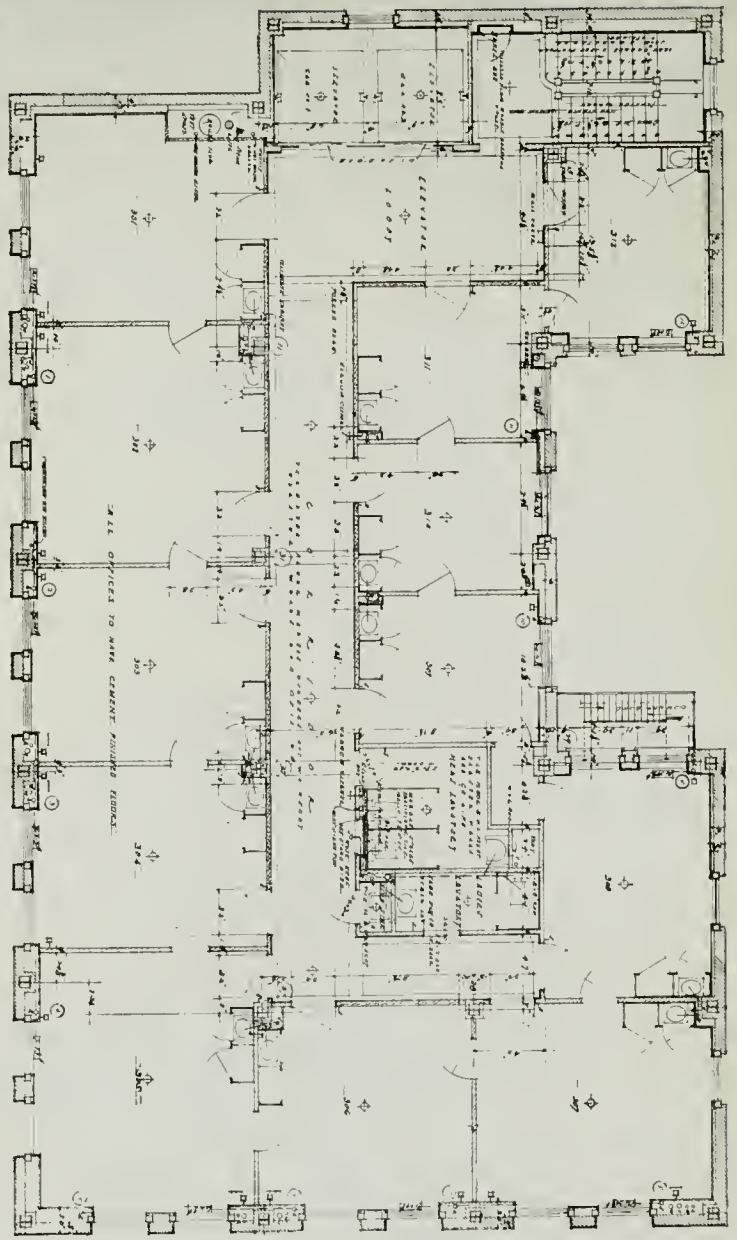


MAIN STREET ELEVATION



FIRST FLOOR PLAN



TYPICAL FLOOR PLAN

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GEORGE W. KELHAM, ARCHITECT

VIEW FROM EAST

VIEW FROM NORTHEAST

THE KING RANCH, SANTA GERTRUDIS, NEAR SAN ANTONIO, TEXAS

ADAMS & ADAMS, ARCHITECTS

VIEW OF LIVING ROOM

KING RANCH, SANTA GERTRUDIS, NEAR SAN ANTONIO, TEXAS

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LIVING ROOM KING RANCH, SANTA GERTRUDIS, NEAR SAN ANTONIO, TEXAS

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VIEW OF LIBRARY

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VIEW OF PASSAGE OR CORRIDOR ABOUT COURT
THE KING RANCH, SANTA GERTRUDIS, NEAR SAN ANTONIO, TEXAS
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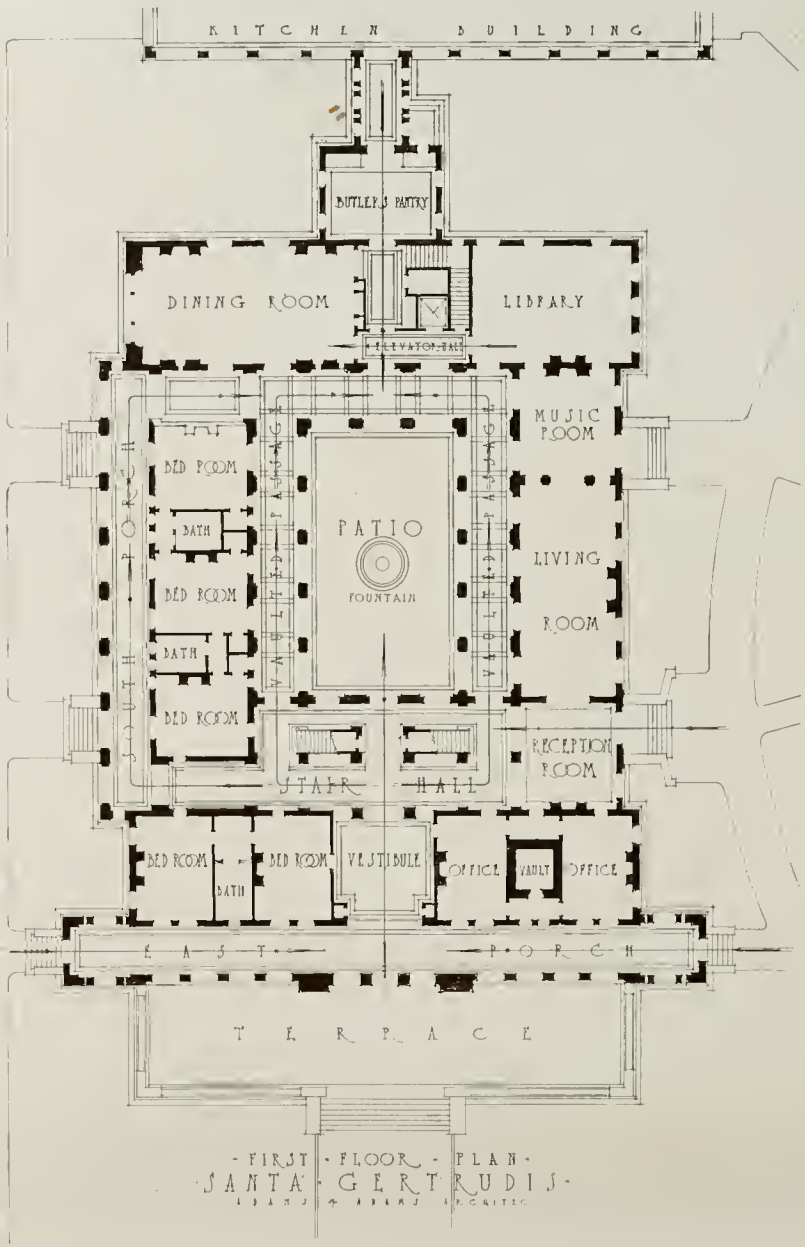
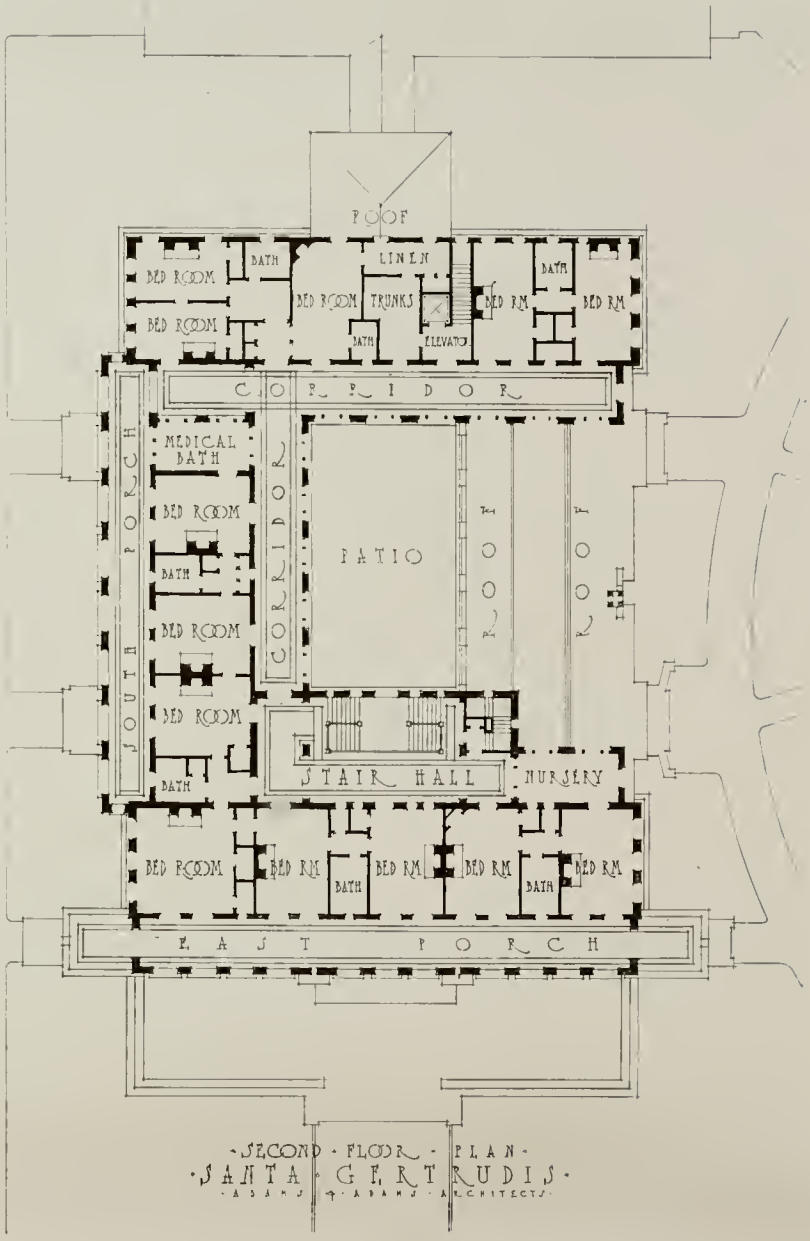




THE KING RANCH, SANTA GERTRUDIS, NEAR SAN ANTONIO, TEXAS
ADAMS & ADAMS, ARCHITECTS

THE ARCHITECT

VOL. XIV SAN FRANCISCO, NOVEMBER, 1917 NO. 5

Editorial.

WAR AND ARCHITECTURE

THE war has knit the country together In the few short months since we entered the conflict, a spirit of fraternity and co-operation has appeared such as the country never before witnessed, and sectional, racial and class antagonisms, if not actually forgotten, are at least laid aside "for the duration of the war." Everywhere are signs that the people are earnestly inquiring as to their personal usefulness in the struggle, the extent of this spirit being not more remarkable than its sincerity. The term *service*, so long in the public mind and on the public lips that it was worn threadbare and bereft of meaning, is now happily succeeded by the question how to "do one's bit." Collectively as well as individually that question is before us. How is architecture to do its "bit"? Some individuals have found the solution for themselves in branches of the national service for which they had some fitness; but this desultory and casual employment of individuals still leaves unanswered the larger question of the profession's duty and its place of greatest usefulness in the present crisis. There has been no general effort to co-ordinate the profession with the work of the nation in a way to realize the full value of its constructive resourcefulness, imagination and esthetic sense.

There is unfortunately a well-defined tendency in the public mind to regard everything esthetic as impractical, expensive—a luxury suited solely to times of ease and peace—something to be carefully wrapped up and laid away until the conflict is over. A very little consideration will show how fallacious this notion is. The influence of form on the mind is a fact too well established to require argument; in even the most utilitarian of industrial projects, thought is now given to the psychological effect of the environment, and its effect upon efficiency is recognized as vital. It is idle to suppose that this fact ceases to be a fact with the transition from peace to war Indeed, with this transition, efficiency changes from a matter of personal taste or of business economy to one of life or death for the nation, and if any aid can be gotten from environment, if any skill or means which we possess can produce that environment, it should be produced

As all know, a vast amount of shelter must be provided in connection with the military operations, and also for the civil population of the reconquered territory. Commonly this is regarded as mere building, not architecture: in other words, that it is building which concerns the body but not the mind. It is quite certain that this view is neither wise nor humane, and that the construction of gloomy and depressing quarters for these uses results in a great loss of efficiency.

The briefest examination of the outstanding features of the conflict indicates a hitherto unknown percentage of mental and nervous disorders among the casualties, due to the intensity of the conflict and to the increased power of modern explosives. These cases are quite beyond the reach of either surgery or medicine, but respond to rest in a favorable environment. The same is also true of medical and surgical cases during the period of convalescence, and military authorities are now recognizing that even the able-bodied and unharmed must have periods of recuperation amid cheerful surroundings.

The extreme brutality of the German invasion has made conditions in the occupied territory such that, as this territory is retaken, the allies are confronted with an extremely difficult problem in caring for the civil population. Three years in the shadow of death has crushed the last spark of animation from the mind of these people, and while they need nutrition and medical care, their chief need is more mental than physical, and can be satisfied only by rest amid cheerful and attractive surroundings.

These brief notes should indicate a wide field of usefulness for architecture. The vast amount of work to be done will necessarily enforce the most extreme economy and the need of speed will require the greatest constructive efficiency. Even with these limitations, skill and study can produce results which contain the germ of beauty and order. Shorn of every embellishment and reduced to the barest necessities, these constructions may yet have the essential qualities of proportion, cheerfulness and proper grouping, which will give them the esthetic effect so vital to their purpose. This result architecture alone can produce.

Granting the soundness of the foregoing observations, there still remains the problem of how to make architectural co-operation effective, how to introduce the new cog into a machine already going at top speed, without stopping or wrecking the machine. Truly it is a difficult matter to solve, but the war, from the first stand of England's "contemptible little army," has been a series of miracles, and of successes won by discarding precedent and established notions. The real difficulty is in getting recognition of the need.

H G Simpson.

Lamp Standard, Hilgard Hall, University of California

Mr. Paul Denivelle's interesting and beautiful sgraffito work on Hilgard Hall, illustrated and described in this issue, is one of the first if not the first example in this vicinity of sgraffito decoration on a permanent monumental building. The charm of this manner of decoration, when handled with the skill shown in this example, may well be expected to stimulate interest in the art and to lead, in the future, to many more delightful works in this material.

Spring Flowering Effects

By DONALD McLAREN

IN connection with the subject of architecture, it is always advisable to consider the garden treatment, as in many cases this adds most effectively to the general appearance and effect of the building created. At the present time we naturally begin to plan for our spring effects and a few notes in connection with this subject may prove of interest.

When we consider flowers in California, our spring may be said to really begin in January, at a time of the year when in most countries, and in most sections of our own United States, it is mid-winter.

It is really started with the blooming of the beautiful Acacia Baileyana, the earliest blooming of all the Acacia family, and undoubtedly the most striking and one of the most rapid growing, although not making the tall growth of some of the other varieties of this wonderful Australian tree, attaining a height of only thirty feet.

We are indeed fortunate in being able to grow practically all of the members of the Acacia family out of doors, for Acacia Baileyana is followed up by Acacia mollissima, Acacia dealbata, Acacia verticillata, Acacia latifolia, Acacia melanoxylon, and so on throughout the entire family of Acacias. Doubtless, however, Acacia Baileyana appeals to most of us probably more strongly than any of the other varieties of this group, opening as it does its great bundles of yellow flowers early in January, which contrast strongly with its silvery, fern-like foliage.

Another very striking early blooming plant is the purple-leaved Plum, or Prunus Pissardi, a native of Persia, which also blooms here in California during the month of January. It forms a most handsome tree, attaining a height of about thirty feet, and is a tree which should be seen more often in our landscape effects, for it has so many good points. Its beautiful white flowers tinted with pink appear before the leaves, after which the reddish purple leaves come out, making a very beautiful contrast throughout the spring, summer and autumn, while in the fall its handsome light red fruit makes it indeed a most desirable tree.

The flowering fruits, the Cherries, Peaches, Pomegranates, Apples, etc., are undoubtedly the most beautiful of all the spring flowering effects, their branches of beautiful blossoms being greatly admired both in the landscape and for decorative work indoors. It is, of course, unfortunate that they are in bloom for such a short period. Later on in the spring, we have the Lilacs, Spiræas, Weigelias, and many other very beautiful spring effects, but perhaps one of the most interesting families we use, especially in landscape work, in and around San Francisco, and in fact which should be used in all the coast regions throughout the entire State, is the Rhododendron family.

There is one special variety of the Himalayan type, by name Rhododendron cornubia, which blooms during the month of February, about three months in advance of all the other members of this numerous type, and which is one of the most striking, as the large trusses

TREE FERNS, RHODODENDRONS AND FERNS, GARDEN OF MR. F. W. BRADLEY, SAN FRANCISCO

MacRORIE-McLAREN CO., Landscape Engineers

of finely formed, magnificent flowers are a brilliant red. The only plants at present on the Pacific Coast are in Golden Gate Park. These plants were imported by the Panama-Pacific International Exposition from the Southern part of England, the plants being at the time of their importation five to six feet in height and about three feet in diameter, making them very expensive plants indeed, it having cost the Panama-Pacific International Exposition $20.00 each to lay them down in San Francisco, but this was amply offset by the fact that the plants did all that was claimed for them, as they were in bloom at the time the Exposition opened on February 20th.

There having been no duty paid on these plants, it was impossible for the Exposition to dispose of them for money, and the only alternative was presenting them to the Park Commission, which was indeed fortunate for our beautiful Golden Gate Park.

In the same manner, Golden Gate Park obtained the seven thousand Rhododendron Hybrids which were imported by the Panama-Pacific International Exposition and which have all been planted in Golden Gate Park. They were in full bloom last spring and made a wonderful effect, as they were all planted in one section. Their next blooming period is a sight to which all plant lovers in this section are eagerly looking forward, as the plants have thrived, and are prac-

Stepping Stone Effect in a Newly Created Garden at San Francisco
MacRorie-McLaren Co., Landscape Engineers

Stepping Stones Where Properly Used and Placed Are Most Effective
MacRorie-McLaren Co., Landscape Engineers

tically all of them very well set with their buds, which will open about May. There are approximately forty varieties in this collection, comprising all of the best hybrid types which have been proven in the past to do well in California, ranging in colors from pure white, through the pinks, reds and purples.

Another very charming little plant which blooms here in California about the first of March is a very beautiful little Azalea from Japan, known as Azalea hinodegiri. It is so thickly covered with its dainty little red flowers that it is impossible to see the foliage. Three thousand of these plants were imported by the Panama-Pacific International Exposition and served their purpose very nobly, giving a wonderful mass effect of red in the north approach to the Court of the Universe. These were likewise turned over to Golden Gate Park, and have all been planted in one mass planting and formed last spring a most brilliant sight, and from a distance they certainly startled the eye. They are very hardy indeed and will stand any amount of sunshine, in this particular being greatly different from the majority of the members of the Azalea family, as the Azalea in general prefers a cool, shady situation.

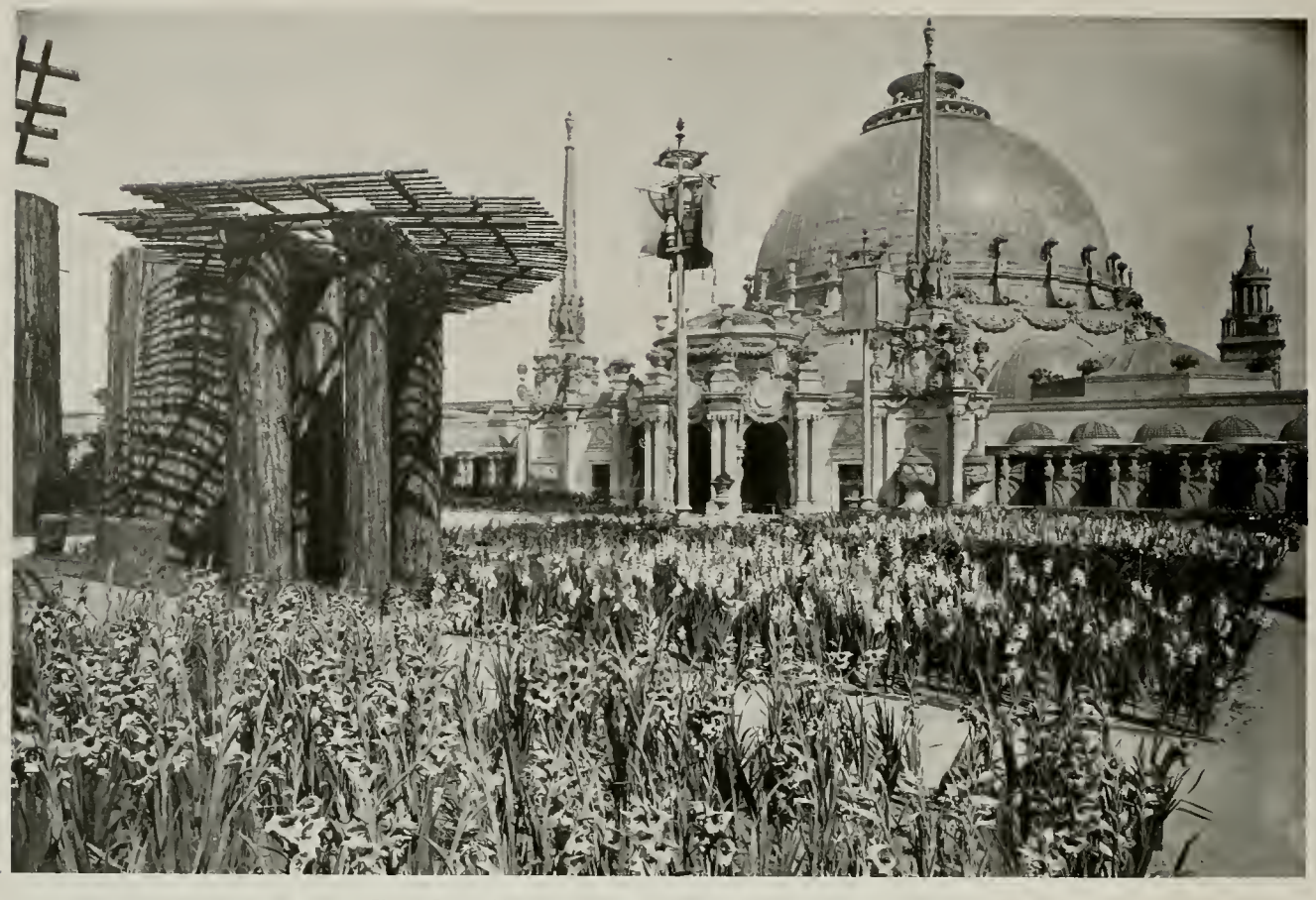
Another member of this family which should be used more in California is the Ghent types of Azalea mollis. These, while their season of flowering is very short, form a wonderful combination of flower in orange and yellow tints, which colors, by the way, are becoming very popular indeed.

We, of course, use prac-

tically all the members of the spring-flowering bulb family, such as the Tulips, Daffodils, Narcissus, Hyacinths, Ranunculus, Anemones, etc., with the exception of the early-flowering Tulips, which we have found by experiment will not do well out of doors in our California climate. Practically all of the other types of spring-flowering bulbs, however, do exceptionally well here and give wonderful effects. They are used both for indoor and outdoor color, and whenever an outdoor effect of a certain color is desired, no class of plants is so effective as these beautiful Holland bulbs.

While on the subject of spring-flowering trees and shrubs, we must not neglect to consider the beautiful flowering Leptospermum laevigatum, sometimes known as the Australian Tea Plant. This shrub attains a height of approximately twenty feet and is of very graceful habit, and during the spring months is covered completely with a thick mass of dainty white blossoms, giving the shrub the appearance of being covered with snow. It is a native of Australia and very hardy throughout all of California with the exception of the higher altitudes. It is very drought-resistant and is found growing all through the western section of Golden Gate Park, in practically pure sand, and in situations where the only water it ever receives is that given by nature in the winter months. It is of fairly rapid growth, and is most effective when used in mass plantings; while, on the other hand, treated as a formal hedge, it gives a very wonderful effect.

Rhododendrons and Rock Plants Used to Advantage in Garden of Mr. F. W. Bradley, San Francisco
MacRorie-McLaren Co., Landscape Engineers



Gladioli Beds at Horticultural Gardens, Panama-Pacific International Exposition

Beds of Rhododendrons in Variety. Court of the Universe, Panama-Pacific International Exposition.
Acacia Latifolia utilized in place of Bay Trees.
JOHN McLAREN, Chief of Landscape Gardening

Current Notes and Comments

The Most Important Room in the House

By HARRIS ALLEN

ASK any architect about the first kitchen he designed, and see him shudder at the recollection! Indeed, it is somewhat difficult to keep up with the improvements that are still being made in this department, and when one considers what dark, poorly ventilated, unsanitary places kitchens were formerly, it is a wonder any of us are still living to remember them, in this age of germs and infections. One remembers also some Epicurean masterpieces that came from those awful retreats like lilies from the mud—but that is another story.

The latest examples of kitchen efficiency are shown in the two illustrations of electric and gas equipment. It is noteworthy that the heat is so conserved in these systems that it is possible to keep a refrigerator in the room, a great saving of steps, and if electric storage be used, a saving of ice and labor. Add the modern *sine qua non*, a fitted kitchen cabinet, and but little else is needed—a sink and some small cupboard space for utensils. "Eliminate all dust-catchers possible," is the new sanitary cry. Here the floor catches it, for it must be either "composition," rubber or cork tile, with covered base and smooth surface. The entire room gleams with enamel paint on the woodwork, walls and ceiling. The gas kitchen shows a refuse incinerator flush with the wall.

Efficiency Gas Kitchen Equipped with "Standard" One-Piece Sink

Improved ventilation would be obtained where a small extra flue run in the chimney with register face in the wall over range near the ceiling, and over window or door in the opposite wall, a transom hinged at bottom to drop in. This creates a circulation of air without draft, disposing of all odors and vapors and eliminating the unsanitary and shadowy hood.

The arrangement of kitchen equipment for greatest efficiency naturally varies somewhat according to the other conditions of the house. It should always be planned to group together articles of furniture used in preparing food and dishes before meals and those used in disposing, clearing and storing after meals. While it is obvious that a separate room is intended to be used as dining and gathering place for employes, "a rest corner" is shown, which is an important adjunct.

The height of sink, drainboards and counter tops is a matter for special attention, and it has been demonstrated that a setting of 36 inches from floor to top of run of sink results in less muscle strain, even to those as short as five feet. The modern ranges, both gas and electric, have apparently unlimited conveniences, such as fireless ovens, various heats, thermostatic control, and so on. Tables, counters and drainboards are either porcelain enameled or zinc, although many housekeepers cling to a wooden drainboard, smoothly countersunk with no grooves.

The intercommunicating phone may be noted—an article quite indispensable in a house of any size. Not so, however, in this climate, is the electric fan, which is prominent in one of these rooms.

For most kitchens, it is advisable to have a center ceiling light for general illumination, with drop lights or brackets at sink and, perhaps, range.

Taking them as a whole, these kitchens, in spite of a slight suggestion of the operating room, leave little to be desired, and have quite the air of *"le dernier cri."*

Efficiency Electric Kitchen Equipped with "Standard" One-Piece Sink

Official News of Pacific Coast Chapters, A. I. A.

The Architect is the Official Organ of the San Francisco Chapter, Southern California Chapter and Washington State Chapter, A. I. A.

The regular minutes of meetings of all Pacific Coast Chapters of the American Institute of Architects are published on this page each month.

San Francisco Chapter, 1881—President, John Bakewell, Jr., 251 Kearny Street, San Francisco, Cal. Secretary, Morris M. Bruce, Flood Building, San Francisco, Cal. Chairman of Committee on Public Information, William B. Faville, Balboa Building, San Francisco. Chairman of Committee on Competition, William Mooser, Nevada Bank Building, San Francisco. Date of Meetings, third Thursday of every month; Annual, October.

Southern California Chapter, 1894—President, J. J. Backus, Room 35, City Hall, Los Angeles, Cal. Secretary, H. F. Withey, 1017 Van Nuys Building, Los Angeles, Cal. Chairman of Committee on Information, W. C. Pennell, Wright & Callender Building, Los Angeles. Date of Meetings, second Tuesday, except July and August, at Los Angeles.

Oregon Chapter, 1911—President, Joseph Jacobberger, Board of Trade Building, Portland, Ore. Secretary, W. C. Knighton, 307-309 Tilford Building, Portland, Ore. Chairman of Committee on Public Information, Joseph Jacobberber. Date of Meetings, third Thursday of every month at Portland; Annual, October.

Washington State Chapter, 1894—President, Charles H. Behb, Seattle. First Vice-President, Daniel R. Huntington, Seattle. Second Vice-President, George Gove, Tacoma. Third Vice-President, L. L. Rand, Spokane. Secretary, J. C. Coté, Seattle. Treasurer, Ellsworth P. Storey, Seattle. Counsels: J. H. Schack, J. Stephen and Charles H. Alden. Date of Meetings, first Wednesday, except July, August and September, at Seattle, except one in spring at Tacoma. Annual, November.

The American Institute of Architects—The Octagon, Washington, D. C. Officers for 1917: President, John Lawrence Mauran, St. Louis, Mo.; First Vice-President, C. Grant La Farge, New York City, N. Y.; Second Vice-President, W. R. B. Willcox, 400 Boston Block, Seattle, Wash.; Secretary, Burt L. Fenner, New York City, N. Y.; Treasurer, D. Everett Waid, 1 Madison Ave., New York City, N. Y.

Board of Directors for One Year—Charles A. Coolidge, 122 Ames Building, Boston, Mass.; Charles A. Favrot, 505 Perrin Building, New Orleans, La.; Elmer C. Jensen, 1401 New York Life Building, Chicago, Ill. *For Two Years*—Edwin H. Brown, 716 Fourth Avenue, Minneapolis, Minn.; Ben J. Lubschez, Reliance Building, Kansas City, Mo.; Horace Wells Sellers, 1301 Stephen Girard Building, Philadelphia, Pa. *For Three Years*—William B. Faville, Balboa Building, San Francisco, Cal.; Burt L. Fenner, New York City; Thomas R. Kimball, Omaha, Neb.

Minutes of San Francisco Chapter

The annual meeting of the San Francisco Chapter of the American Institute of Architects was held at Tait's Cafe, 168 O'Farrell Street, on Thursday evening, October 18, 1917. Mr. Edgar A. Mathews, the President, called the meeting to order at 8:00 p. m.

The following members were present: G. A. Applegarth, John Bakewell, Jr., J. Harry Blohme, Hermann Barth, E. G. Bolles, William Binder, W. D. Bliss, Fred D. Boese, Arthur Brown, Morris M. Bruce, Ernest Coxhead, Will G. Corlett, W. H. Crim, Jr., Leo J. Devlin, Charles W. Dickey, J. J. Donovan, A. R. Denke, J. S. Fairweather, W. B. Faville, Albert Farr, W. C. Hays, August G. Headman, B. S. Hirschfeld, John Davis Hatch, B. J. Joseph, Alfred H. Jacobs, E. J. Krafft, John O. Lofquist, James Magee, Kenneth MacDonald, Jr., Fred H. Meyer, W. Garden Mitchell, James R. Miller, Edgar A. Mathews, William Mooser, George B. McDougall, C. A. Meussdorffer, James T. Narbett, Matthew O'Brien, Smith O'Brien, M. V. Politeo, W. H. Parker, T. Paterson Ross, George Rushforth, Perseo Righetti, John Reid, Jr., W. O. Raiguel, Horace G. Simpson, Arthur G. Scholz, Sylvain Schnaittacher, Frank T. Shea, Albert Schroepfer, Henry C. Smith, Walter T. Steilberg, Fred D. Voorhees, Clarence R. Ward, Carl Werner, Charles Peter Weeks.

Among the members present who have entered the national service were Captain James T. Narbett and First Lieutenant John Davis Hatch. The President called on Captain Narbett, who stated that he was waiting an assignment and had not yet entered the service. First Lieutenant John Davis Hatch, of the Coast Artillery, gave an interesting account of life at the fortifications.

MINUTES

The minutes of the meeting held on September 20, 1917, were read and approved.

STANDING COMMITTEES

The following standing committees submitted their annual written reports, which were ordered received and placed on file: Committee on Education, Committee on Institute Relations, Competition Committee and Legislative Committee.

It was moved by Mr. Mooser, and seconded and carried, that the annual report of the Committee on Institute Relations be spread on the minutes and printed.

It was also moved, seconded and carried that the report of the Legislative Committee be spread on the minutes and printed.

It was moved, seconded and carried that the report of the Competition Committee be spread on the minutes.

REPORTS OF OFFICERS

The Secretary read the annual report of the Board of Directors and of the Secretary and Treasurer, both of which were ordered received and placed on file.

The Chair appointed Messrs. B. J. Joseph and Arthur Brown a committee to audit the books of the Secretary.

The President read his annual report, which was ordered received and placed on file.

COMMUNICATIONS

From Vermont Marble Company relative to a motion-picture film showing the production of marble from quarrying to the finished product; from the Committee on Civic Duty relative to the election on November 6, 1917; from Mr. E. C. Kemper, Executive Secretary of the A. I. A. relative to the resignation of Mr. Edmond Kollofrath as an Institute member, effective September 8, 1917.

NEW BUSINESS

The change under Section 2, Article 4 of the By-Laws having been recommended at the previous meeting and having been balloted upon, tellers were appointed to count the ballots. There being but two negative ballots, the amendment was declared duly carried, as follows:

"The Board of Directors shall consist of the three above-named officers, ex-officio, and six additional members, or trustees, elected from the Institute membership, five of whom shall constitute a quorum." After the adoption of this change in the By-Laws, there shall be elected six trustees, of whom two shall be elected for one year, two for two years and two for three years. At each subsequent election thereafter, two members shall be elected to serve on the Board for three years.

NOMINATION OF NEW DIRECTORS

Mr. August G. Headman was nominated by Mr. W. H. Crim, Jr., for the three-year term.

Mr. Edgar A. Mathews was nominated by Mr. W. C. Hays for the three-year term.

Mr. John J. Donovan was nominated by Mr. William Mooser for the three-year term.

Mr. Charles P. Weeks was nominated by Mr. Arthur Brown for the two-year term.

Mr. Smith O'Brien was nominated by Mr. Sylvain Schnaittacher for the two-year term.

Mr. Albert Schroepfer was nominated by Mr. Fred D. Boese for the two-year term.

It was moved by Mr. Faville, and seconded and carried, that the two receiving the greatest number of votes be elected for three years and those receiving the next greatest number of votes be elected for two years.

At the suggestion of Mr. Mooser, it was moved, seconded and carried that the names of the candidates for trustees be inserted in the notice for the next meeting.

Mr. Schnaittacher, for the State Board of Architecture, urged subscriptions for the second Liberty Loan. Mr. Mathews requested that the information asked for in the communication from the State Board of Architecture be submitted. Mr. Bakewell explained that the information was not for publication.

Mr. Schnaittacher stated that, referring to Chapter activities, it should be noted that, representing the Chapter, he had acted as a member of two of the committees of the Industrial Accident Commission in the preparation of safety orders.

ELECTION OF OFFICERS

The next order of business was the election of officers for the ensuing year.

Ballots having been prepared containing the names of the nominees, the members proceeded to cast their ballots, and Messrs. Mooser, Crim and Weeks were appointed tellers to count the ballots. The ballots having been counted, the Chair announced that the following had been elected to serve the Chapter for the ensuing year:

John Bakewell, Jr., President; Sylvain Schnaittacher, Vice-President; Morris M. Bruce, Secretary-Treasurer; W. B. Faville and G. Alexander Wright, Trustees.

A vote of thanks was tendered to the administration of last year for their services during the term, particularly in connection with the work for the national defense.

Mr. Bakewell, accepting the Presidency, made remarks appropriate to the occasion and stated that he expected to unify the Chapter.

ADJOURNMENT

There being no further business before the Chapter, the meeting adjourned at 9:30 p. m.

Subject to approval.....1917.

MORRIS M. BRUCE, *Secretary*.

(Continued on Page 334)

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San Francisco, Cal., October 18, 1917.

To the President and Members of
San Francisco Chapter, A. I. A.

Gentlemen:

Herewith we hand you the annual report of the Legislative Committee, which is as follows:

During the year we attended three meetings of the State Housing and Immigration Commission, two of which were held in San Francisco and one at San Diego, in the matter of tenement house, hotel and lodging house and dwelling house laws, which laws went into effect September 1, 1917.

We also attended several meetings in San Francisco and Sacramento in the matter of the proposed Building Law of Architects and Engineers, but which did not become a law.

Respectfully submitted,

(Signed) Albert Schroepfer, *Chairman.*
William Mooser.

October 18, 1917.

San Francisco Chapter A. I. A. Report of Committee on Institute Relations.

The Committee on Institute Relations has to report most important and far-reaching changes in the organization of the Institute in its relation to constituent Chapters, which were adopted at the last convention of the Institute, held in Minneapolis. These changes remove what has seemed to be a most anomalous condition in that one might hold membership in a Chapter of the Institute without being a member of the central body. *In* the organization, but not *of* it, such a member existed as though floating in a vacuum, contained within the Institute, but touching it at no point. By the recent amendments to the Institute's constitution, this condition is no longer possible, since in the future new "Chapter" members also become "Institute" members, except that provision is made for "associates" in a sort of probation, looking always, however, to membership as the next step.

The old classes of Chapter, Honorary and Corresponding members, who do not become members under the new constitution and by-laws, will naturally retain their present status and rights, but no new members of these classes will be admitted.

Four members of the Chapter's Committee on Institute Relations, as well as the Chapter's President, were present in the preliminary conference at Minneapolis and at the session of the convention at which the amendments were discussed and carried.

In order that these changes may be uniformly carried into effect, the Institute has prepared a standard form of constitution and by-laws for Chapters, subject, of course, to such revision within the limit of the Institute constitution as is necessary to meet local conditions of the various Chapters. Copies of this form have just been received here for the Chapter's consideration.

Provision is made for "State Associations" consisting of two or more Chapters, with the machinery for their government. There is also provision for the co-operation of Chapters with other associations, which, however, shall have no connection with the Institute.

In connection with the "Standards of Practice" prescribed by the Institute, this Chapter's Committee believes that the prohibition against advertising is ineffective and that if it were abolished a consensus of opinion among the Institute members would regulate the matter at least as well.

The Chapter Committee is of the opinion that the method of nominating and electing Fellows of the Institute is open to discussion, even to the extent of questioning the existence of an undemocratic classification in which a large percentage of Institute members is set apart for "distinguished achievement or service to the profession."

While the matter is perhaps more within the province of the Committee on Competitions than of this committee, attention should be called to the loose application under certain circumstances of generally well-established principles governing competitions. The Institute code clearly defines a competition as existing when two or more architects are submitting plans for the same project. There seems to be a too common local practice, mainly in private or corporation work, for architects to furnish sketches knowingly in what they choose to call "private competitions." The Institute makes no such distinction.

Respectfully submitted,

(Signed) Wm. C. Hays, *Chairman,*
W. B. Faville,
Sylvain Schnaittacher,
John Bakewell, Jr.,
Morris M. Bruce.

Minutes of Southern California Chapter

The one hundred and tenth meeting of the Southern California Chapter of the American Institute of Architects was held at Jahnke's Cafe on Tuesday, October 9, 1917.

The meeting was called to order by Mr. J. E. Allison, President, at 7:30 p. m. The following members were present: D. C. Allison, J. E. Allison, J. C. Austin, J. J. Backus, C. H. Brown, T. A. Eisen, P. A. Eisen, A. M. Edelman, W. E. Erkes, Lyman Farwell, Elmer Grey, Lester H. Hibbard, R. Germain Hubby, Frank D. Hudson, John P. Krempel, A. C. Martin, S. Tilden Norton, H. M. Patterson, T. F. Power, Alfred W. Rea, Richard S. Requa, A. F. Rosenheim, J. T. Vawter, A. R. Walker, August Wackerbarth, Carleton M. Winslow, H. F. Withey.

As guests of the Chapter were present: Mr. Norman Smith, of the American Ambulance Corps; Mr. John Bowland, of the *Southwest Contractor.*

The regular order of business was set aside to permit Mr. Smith, of the American Ambulance Corps, to speak on the subject of his service and experience on the battlefield in France last year. This talk proved most interesting, and a hearty and unanimous vote of thanks was offered by Mr Farwell and seconded by Mr. Krempel.

Following Mr. Smith's talk, the minutes of the 109th meeting were read and approved.

President J. E. Allison presented the annual address, followed by the annual report of the Secretary. These reports were ordered spread upon the minutes of the meeting.

The Treasurer's annual report was next presented, and the following Auditing Committee appointed to check the same: Messrs. Withey, Vawter and Norton.

Awaiting the report of the Auditing Committee, the annual report of the Board of Directors was read by Mr. P. A. Eisen, and likewise ordered spread upon the minutes of the meeting.

Communications were next read as follows:

From the City Planning Association of Los Angeles relative to city planning, and requesting the appointment of a committee of five to co-operate with the organization. This was referred to the incoming officers for attention.

From the California Redwood Association, giving the members of the Chapter an invitation to attend demonstrations at the Metropolitan Exhibit on October 15th and 16th.

From the Joint Committee of the Technical Societies announcing the annual dinner of the societies to be held on the 23d of October

From Aymer Embury, 2d, Captain of the Engineer Officers' Reserve Corps, dated September 19th, relative to the organization of camouflage units. This was referred to Mr. Vawter for attention.

A report was next rendered by the Auditing Committee to the effect that the Treasurer's report was in all respects correct, and the same was ordered spread upon the minutes of the meeting.

Nomination of officers for the ensuing year was next in order, and the following were elected: J. J. Backus, President; H. M. Patterson, Vice-President; H. F. Withey, Secretary; August Wackerbarth, Treasurer; Lyman Farwell, three-year term on the Board of Directors.

The Special Committee on the Revision of the Constitution and By-Laws was next called upon to report, and Mr. Krempel, chairman, stated that the committee had completed its work, ready for a reading of the same at this meeting, but inasmuch as a revised and approved draft of a standard form had been received the day before from the

(Continued on page 338)

CORNER VIEW OF THE NEW GALLERIES OF SARSI STUDIOS
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FOR pointing and setting and for decorative work, use Atlas-White Portland Cement---a true Portland Cement of the same strength and quality as Atlas Portland Cement.

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The Atlas Portland Cement Company, 30 Broad St., New York, or Corn Exchange Bank Bldg., Chicago:
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ARCHITECTS' REFERENCE INDEX

Containing List of Manufacturers, Their Representatives and Serviceable Literature

ASBESTOS BUILDING LUMBER
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Illustrated and descriptive pamphlet, 7¾x10¾, 8 pp. Pamphlet, 4x8½, 8 pp. Price list, 3½x6¼. Literature of various sizes, samples, etc. "Service Sheets," working drawings, details of application, size 16½x21½.

ASBESTOS CORRUGATED SHEATHING
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Descriptive catalogue, 5¼x8¼, 24 pp. Catalogue of details and specifications for application of roofing and siding, size 8½x11, 40 pp. Lists of buildings covered. Price lists, 3½x6¼, 6 pp., and literature of various sizes, samples, etc. "Service Sheets," working drawings, details of application, size 16½x21½.

ASBESTOS SHINGLES
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Illustrated catalogue. Detail specifications, 8x10, 20 pp. Descriptive catalogue, various types of roof covering, 5¼x8¼. Various pamphlets, 3⅝x6. Current price lists, 3½x6¼, 6 pp. Lists of buildings and literature, various sizes, samples, etc. "Service Sheets," working drawings. Detail of application, size 16½x21½.

BRICK, ENAMELED
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Catalogue and various literature.
Los Angeles Pressed Brick Co., Frost Bldg., Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Catalogue on "Enameled Brick for Facing," illustrating and listing names of prominent buildings finished with Enameled Brick. 5x7½. 48 pp.

BRICK, FIRE AND REFRACTORIES
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Henry Cowell Lime & Cement Co., 2 Market Street, San Francisco, Cal.
Imported and domestic brands.
Catalogues and various literature.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Bldg., Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Descriptive catalogue, 5x7, 54 pp.

BRICK, PRESSED
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Catalogues and various literature.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Bldg., Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Moulded and Ornamental Pressed Brick. General catalogue. 5x7. 54 pp.

BRICK, PAVING
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.

CEMENT, PORTLAND
Atlas Portland Cement Company, The, 30 Broad St., New York.
(Western Representatives, see advertisement.)
Building a Bungalow. Addressed to owners. Booklet 8x10½ 14 pp, with 4 insert plates.
Choosing the Garage. Describing actual construction. Booklet. 8x10½ in. 26 pp.
"Color Tones in Stucco," a booklet of 20 pages and cover, in full colors. Size 8½x11 in.
Commercial Garages. With construction notes and architectural treatment. Booklet 8x10½ in. 12 pp.
Early Stucco Houses. With modern stucco specifications. Booklet. 8½x11 in. 24 pp.
Guide to Good Stucco. Addressed to contractors. Booklet. 8½x11. 20 pp.
Handbook and Treatise. Concrete in factory construction. 6½x8¾ in. 250 pp.
Information for Home Builders. Addressed to owners. Booklet. 8½x10¾. With 8 insert plates.
Henry Cowell Lime & Cement Co., 2 Market Street, San Francisco.
Cowell Portland Cement Co., Cowell, Cal.
Mt. Diablo Brand especially adapted for cementing oil wells. Literature and pamphlet supplies on request as furnished by the Portland Cement Association.
Santa Cruz Portland Cement Co., Crocker Bldg., San Francisco.
Standard Portland Cement Co., Crocker Bldg., San Francisco, Cal.
Bulletin 12 pp. Size 6x9; also furnish bulletins and specifications for various classes of work requiring Portland Cement.

ELECTRICAL EQUIPMENT
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Descriptive Pamphlet, 3½x6. 12 pp. Descriptive, 4x8½. 8 pp. "Service Sheets" working drawings. Detail of application. 16½x21½.

ELEVATORS
Otis Elevator Co., Eleventh Avenue and 26th Street, New York.
Otis Elevator Co., 2300 Stockton Street, San Francisco, Cal. Offices in all principal Coast cities.
Otis Electric Traction Elevators. Bulletin. 6x9 in. 28 pp.

ESCALATORS
Otis Elevator Co., Eleventh Avenue and 26th Street, New York.
Otis Elevator Co., 2300 Stockton Street, San Francisco, Cal. Offices in all principal Coast cities.
Otis Escalators. Bulletin. 6x9 in. 36 pp.

GARDEN POTTERY AND FURNITURE
Sarsi Studios, 361 Golden Gate Avenue, San Francisco, Cal.
Pamphlet. Pompeiian Stone. Size 6x9 in. 4 pp.

GLASS
W. P. Fuller & Co. Principal Coast cities.
Plate, Sheet and Mirror Lists.
Glass Samples.
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal Pacific Coast representative CORRUGATED WIRE GLASS for skylight construction (without housings), used in connection with Asbestos Corrugated Sheathing. Catalogue of details. 8½x11. 40 pp.

IRONING BOARDS
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
Pamphlet. 3½x6⅜ in. 4 pp.

LANDSCAPE ENGINEERS
MacRorie-McLaren Co., 141 Powell Street, San Francisco, Cal.
Descriptive catalogue. 5x8¾. 52 pp.

LATH, METAL
North Western Expanded Metal Co., 934 Old Colony Building, Chicago, Ill.
Designing Data. Scientific treatise on reinforced concrete. 4x6½ in. 88 pp.
Kno-Burn Expanded Metal Lath. Treatise on metal lath, with details and specifications. 6x9 in. 52 pp.
"Chanelath" Handbook. Treatise on ribbed metal lath details and specifications of its application to reinforced concrete construction and for plastering work. 6x9 in. 48 pp.
Stucco Specifications. Reprint of the standard specifications adopted by the American Concrete Institute.

LIME
Henry Cowell Lime and Cement Co., 2 Market Street, San Francisco, Cal.
Santa Cruz and Cowell Santa Cruz Brands.

MANTEL BRICK
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Catalogues and various literature.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Illustrative of designs for mantel. 5x6 in. 54 pp.

MANTELS, STONE
Sarsi Studios, 361 Golden Gate Avenue, San Francisco, Cal.
Pamphlet on Art Caen Stone. 6x9 in. 4 pp.

MILL WORK
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
Catalogue of Moulding Columns, Doors and General Mill Work. 7x10. 94 pp.

PAINTS, ENAMELS AND WOOD FINISHES
Berry Bros., Wight and Leibe Streets, Detroit, Mich.
Berry Bros., 250 First Street, San Francisco, Cal.
Natural Woods and How to Finish Them. Complete varnish specifications. 4¾x6½ in. 94 pp.
Luxeberry Cement Coating. Color card. 3⅛x8⅞ in. 3 pp.
Boston Varnish Co., Everett Station, Boston.
San Francisco Office, A. L. Greene, Mgr., 311 California Street.
Kyanize Enamel. Complete specifications. Booklet. 5x7 in. 20 pp.
Kyanize White Enamel. Directions. Circular. 3½x6 in. 8 pp.
Price List of Varnishes and Enamels. 3½x6 in. 24 pp.
W. P. Fuller & Co. Principal Coast cities.
Paints and Varnish specifications. 14-page booklet.
Pertinent Facts on Paints and Painting. 14-page booklet.
Color cards and descriptive circulars on: House Paints, Floor, Porch and special paints for all purposes.
Silkenwhite Enamel, Tinted Panels, and descriptive matter, Wall Finishes and Kalsomine. 20-page booklet.
Decorator's Sample Books.
The Muralo Co., New Brighton, New York.
A. L. Greene, Manager San Francisco Office, 311 California Street, San Francisco, Cal.
Catalogues, literature and color cards.
R. N. Nason & Co., 151 Potrero Avenue, San Francisco, Cal.
Catalogues, literature and color cards.
Wadsworth, Howland & Co., Inc., 139 Federal Street, Boston.
San Francisco Office, James Hambly & Sons, 268 Market Street, San Francisco, Cal.
Los Angeles Office, 447-449 E. Third Street, Los Angeles, Cal.
Bay State Brick and Cement Coating. Catalogue. 4x9. 24 pp. Color plates.
Bay State Finishes, Stains, and Varnishes. Pamphlets. Color cards, etc.

PIPE, WOOD
Pacific Tank & Pipe Co., 318 Market Street, San Francisco, Cal.
Catalogue of wood pipe and tanks for all purposes. 4x8¾ in. 40 pp.

PLUMBING EQUIPMENT
Pacific Sanitary Mfg. Co., 67 New Montgomery Street, San Francisco, Cal.
Northern Manager, H. L. Frank, 80 Front Street, Portland, Ore.
Southern Manager, C. B. Noyes, 201 Union Oil Building, Los Angeles, Cal.
General catalogue "C." 6½x9 in. 176 pp. Indexed.
School Sanitation Book. 6x9. 32 pp.
Standard Sanitary Manufacturing Co.
San Francisco Warehouse, Display Rooms and Offices, Bluxome St.
Los Angeles Warehouse, Display Rooms, Offices, Mesquit St.
Seattle, 5300 Wallingford Ave.
General Catalogue "P," 9x12, 674 pp. General Catalogue "PF," 9x12, 329 pp. Factory Sanitation Catalogue, 9x12, 36 pp. Built-in Bath, 9x12, 37 pp. Pottery Catalogue Sanitary Earthenware, 9x12, 38 pp. Shower Booklet, 3½x6, 19 pp. Efficiency Kitchen Book — Modern Kitchen Equipment, 5x7, 15 pp. Plumbing Fixtures for the Home, 5x7¾, 63 pp.

PORTABLE HOUSES
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
Catalogue Treatise on Portable House. Suitable for any location. Size 4x9. 12 pp.

POTTERY, GARDEN
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Catalogues and various literature.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.

REINFORCING
North Western Expanded Metal Co., 934 Old Colony Building, Chicago, Ill.
"Chanelath" Handbook. Treatise on ribbed metal lath details and specifications of its application to reinforced concrete construction and for plastering work. 6x9 in. 64 pp.

ROOFING
W. P. Fuller & Co. Principal Coast cities.
Samples and descriptive circulars.

ROOFING TIN
Taylor Co., N. & G., 300 Chestnut Street, Philadelphia, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
A Guide to Good Roofs. Booklet. 3¾x5⅞ in. 24 pp.
Selling Arguments for Tin Roofing. Booklet. 6x9¼ in. 80 pp.
"Service Sheets." Working Drawings. Details of tin roofing construction and tables of covering capacity. 16½x21½ in.
Standard Specifications for Tin Roofing Work. 7½x9 in.
Current Price List.

SEWER PIPE AND CLAY PRODUCTS
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Catalogues and various literature.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Hand book and price list of sewer pipe, flue lining, chimney pipe and interlocking brick. 4x7. 22 pp.

SLIDING DOORS
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
"Pitcher's Disappearing Door." Folder. 3½x6 in. 8 pp.

TANKS, WOOD
Pacific Tank & Pipe Co., 318 Market Street, San Francisco, Cal.
Catalogue illustrative and descriptive of house and building tanks, towers and wood pipe for various purposes. 4x9. 40 pp.

TERRA COTTA, ARCHITECTURAL
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Photographic albums, catalogues and literature of various sizes.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
"Standard Construction," published by the National Terra Cotta Society, containing details and plates for proper construction. Photographic albums of completed work.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
Specifications for architectural terra cotta and details of construction.
Northern Clay Co., Auburn, Wash.
Photographic albums, catalogues and literature of various sizes.

TILE, HOLLOW
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Catalogues and various literature.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Hollow Tile Fireproofing. General catalogue. 5x7 in. 54 pp.

TILE, ROOFING
N. Clark & Sons, 116 Natoma Street, San Francisco, Cal.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Catalogue showing attractive application of details and specifications for roofing tile. 8x11 in. 32 pp.

TREES, PLANTS AND SHRUBS
MacRorie-McLaren Co., 141 Powell Street, San Francisco, Cal.
Descriptive catalogue. 5x8¾. 52 pp.

VARNISHES
Berry Bros., Wight and Leibe Streets, Detroit, Mich.
Berry Bros., 250 First St., San Francisco, Cal.
Natural Woods and How to Finish Them. Luxeberry cement coating color cards. 3⅛x8⅞. 3 pp. Complete varnish specifications. 4¼x6½. 94 pp.
Boston Varnish Co., Boston, Mass.
San Francisco Office, A. L. Greene, Mgr., 311 California Street.
Kyanize White Enamel. Directory Circular. 3½x6 in. 8 pp.
Kyanize Enamel. Complete Specification Booklet. 5x7. 20 pp.
Price lists of varnishes and enamels. 3½x6. 24 pp.
W. P. Fuller & Co. Principal Coast cities.
Unvarnished Facts. 8-page pamphlet.
Varnish and Enamel Descriptive Catalogue. 32-page catalogue.
Valentine's Valspar. Booklets and Circulars.
Wooden Panels Finishes with Fuller Varnishes and Oil Stains. Over 1,000 different Finishes.
Wadsworth, Howland & Co., Inc., 139 Federal Street, Boston.
James Hambly & Sons, 268 Market Street, San Francisco, Cal.
Pamphlets and color cards.
Los Angeles Office, 447-449 E. Third Street, Los Angeles, Cal.
R. N. Nason & Co., 151 Potrero Avenue, San Francisco, Cal.
Pamphlets, descriptive literature and color cards.

SASH CORD
Samson Cordage Works, 88 Broad Street, Boston, Mass.
Pamphlet in colors. 3½x6¼. 24 pp.

WALL BOARDS
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
Pamphlet. A treatise on application of wall boards. 3½x6⅜. 6 pp. Also sample.

WATER HEATERS
Hoffman Heater Co., Lorain, Ohio.
Hoffman Heater Co., 397 Sutter Street, San Francisco, Cal.
Descriptive catalogue. 5x7 in. 32 pp.

WATERPROOFING
W. P. Fuller & Co. Principal Coast cities.
Color samples and descriptive circulars.
Concreta and Armorite.
The Muralo Co., New Brighton, New York.
San Francisco Office, A. L. Greene, Mgr., 311 California Street, San Francisco, Cal.
Catalogues and various pamphlets.
R. N. Nason & Co., 151 Potrero Avenue, San Francisco, Cal.
Pamphlets and literature.
Wadsworth, Howland & Co., Inc., 139 Federal Street, Boston.
James Hambly & Sons, 268 Market Street, San Francisco, Cal.
Los Angeles Office, 447-449 E. Third Street, Los Angeles, Cal.
Bay State Brick and Cement Coating. Catalogue. 6x9 in. 24 pp.

Sgraffito

(Continued from page 292)

touching up afterwards, or "faking" of any part of the work was resorted to in achieving the present result. This important consideration would have endangered or defeated the permanency of the whole scheme. These most important requirements of permanency and durability find their insurance in the combination of materials and methods of workmanship that, together in themselves, are the guaranty, and which writer obviously needs to refrain from attempting to specify.

In conclusion, it may be well to point the moral of all the foregoing, that, in order to avoid an untimely fate for sgraffito, it should, from its inception, be provided for in the same manner and receive the same consideration that models of ornamentation receive where a higher class of sculpture or ornament is contemplated. Such work should be subjected to the same reservation of selective letting to be successful, because this work is no more nor less than modeling in color without relief and a greater degree of designing and modeling ability is required, plus many other important, correlated elements affecting the design and color blend, and, most important, in order that the finished product shall not be "monkeyed" with or "doctored," if permanency is to be combined with appearance.

As to cost, it is not likely that, because of these inseparable facts, a high-quality sgraffito will ever be cheaper than its commensurate effect when executed, any more than a properly studied piece of modeling. The very nature of each step that combines to produce a successful example will make any attempts at cheapening it ride for a fall.

The name sgraffito will cover a multitude of sins during its uplift, possibly, but any successful example will amply reward the architect who has foreseen these aforementioned difficulties, and struck a proper balance between a real art and grotesqueness.

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of THE ARCHITECT, published monthly at San Francisco, Cal., for October 1, 1917, State of California, City and County of San Francisco. Before me, a Notary Public in and for the State and county aforesaid, personally appeared J. A. Drummond, who, having been duly sworn according to law, deposes and says that he is the owner of THE ARCHITECT and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit: 1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Name of Publisher, The Architect Press; postoffice address, San Francisco, Cal.; Editor, Harris Allen, San Francisco, Cal.; Managing Editor, J. A. Drummond, San Francisco, Cal.; Business Manager, J. A. Drummond, San Francisco, Cal. 2. That the owners are (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.): J. A. Drummond, 245 Mission Street, San Francisco. 3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are (If there are none, so state): None. J. A. Drummond, Owner. Sworn to and subscribed before me this 27th day of September, 1917. (Seal) W. W. Healey, Notary Public in and for the City and County of San Francisco, State of California. My commission expires August 28, 1921.

Secretary of the Institute, it became necessary for the committee to again go over the subject. Therefore the committee's report would be postponed until the next meeting.

It was moved by Mr. Austin, duly seconded and carried, that such members of the Chapter as had joined the American Army or Navy should be relinquished from all obligations of dues and assessments of the Chapter during their absence in Government service.

Then followed a discussion on the subject of advertising, lead by Mr. Rosenheim and participated in by Mr. Krempel, Mr. Theodore Eisen, and others. At length Mr. J. E. Allison motioned that the discussion be closed. This was duly seconded and passed. A motion was made by Mr Withey, duly seconded and carried, that the subject of advertising and publicity be referred to the Committee on Ethics and Practice as a subject for investigation, regarding what is, and what is not, legitimate advertising, and prepare a report on the same for a meeting in the near future.

A motion was made by Mr. Krempel, duly seconded and passed, that a copy of the President's report be sent to the State Board of Architecture.

A tentative ordinance prepared by the Master Painters' Organization of Los Angeles for the licensing of contracting painters was offered for consideration. This was ordered referred to the Committee on Legislation for study and report.

There was next read a copy of a letter addressed to Mr. William Stanley Parker, Secretary of the Institute, written by Bert L. Fenner, chairman of the Committee on Ethics and Practice. This communication was in answer to a request of Mr. Rosenheim regarding the action of the Board of Directors on the subject of competitions for public work in California during the year of 1915. This letter was ordered filed.

The meeting was adjourned at 10:24 p. m.

H. F. Withey, *Secretary.*

Minutes of Washington State Chapter

The regular meeting was called at the Northold Inn at 6 p. m., October 4, 1917.

Those present were: President Bebb, Messrs. Baeder, Everett, Gould, Huntington, Parks, Storey, Willcox, Svarz, Alden, Brust, Field, Heath, Loveless, Stephen, Willatzen, Mann, Siebrand.

Mr. Bebb opened the meeting by some appropriate remarks on the resumption of Chapter activities for the season of 1917 and 1918, following which the minutes of the last regular meeting of June 6th and the Council meetings of June 18th, August 7th, August 31st, September 19th, and the minutes of a special meeting of September 25th were read. The minutes of the Council meetings were read as a matter of information to the members and the minutes of the regular and special meetings were approved.

The following committee reports were made and discussed:

Committee on Civic Design: Captain Alden reported in regard to the Cedar Falls town site plan, a blue print of which was presented for the inspection of those present. The committee had met with Mr. Weeks and made an inspection of the town site, after which they prepared a short program asking the members of the Chapter to present suggestions to the committee, and three suggestive sketches were received by the committee. Mr Baker, Mr. Williams and Mr. Black, of Tacoma, should receive credit for this. Mr. Alden spoke of the traveling exhibit of town planning of the Institute and strongly urged the committee to proceed with its arrangements for a showing of this exhibit in Seattle during the season. Mr. Huntington and Mr Willcox on this same committee spoke in regard to the Cedar Falls town site plan and suggested that the *Journal* be informed of the work which had been done and that the Secretary be instructed to send a plan for reproduction in the magazine. Mr. Loveless suggested that the newspapers might also be interested and this matter was referred to.

Committee on Public Information: Mr. Gould, chairman, reported that nothing particularly had been done during the summer by this committee. He informed the Chapter regarding the status of the Department of Architecture at the University of Washington, stating that Mr. McClellan and Mr. Myers had been engaged as assistant professors for the season and reported a considerable dropping off in new students. In this connection, Mr. Huntington suggested that the Chapter take some interest in the courses in drawing in the city high schools in the way of outlining proper courses and possibly supervising them. Mr. Loveless objected to this, as he believed the present instructors incompetent to carry out any course mapped out by the Chapter. The President referred this to the Committee on Education.

Mr. Schack and Mr. Mann were appointed by the President in the place of Mr. Webster and Mr. Coté on the Committee on Public Information.

Committee on Exhibition: Mr. Field, chairman, reported regarding the traveling architectural exhibit that the exhibit had been shipped from Renton on the Northern Pacific Railroad and had not been heard from since the 1st of September.

Committee on Institute Affairs: Mr. Willcox gave a very interesting description of the meeting of the Board of Directors of the Institute held during the month of September in Cleveland, which he attended.

Committee on Ordinances: Mr. Stephen stated that the Board of Appeals had recommended to the City Council a rearrangement in the Health Department and Building Department so that but one permit would be necessary, which could be procured from the Building Department when application was made for permit to erect a building. He made a brief summary of the proposed plumbing ordinance written by Chief Inspector MacIntyre *et al.*, and that the ordinance seemed considerably padded and would be more expensive in operation. It also created a number of extra inspectors. He read a part of the report of the Board of Appeals objecting to the proposed ordinance. This resulted in a motion that a special committee be appointed to consider the proposed new plumbing ordinance and to take such action as they considered necessary.

Committee on Professional Practice and Charges: Mr. Willatzen reported that the only matter which had been referred to his committee was the case of Mr. Riggs, of Spokane, who wished the Chapter to assist him in adjusting a matter of charges with the school board. It was suggested the Secretary write Mr. Riggs and request him to join the Chapter.

Special Committee on Capitol Group Plans: Mr. Willcox, chairman, made a brief report of the action of this committee.

Report of Treasurer: Mr. Storey stated that the Chapter had in the bank $51.76. Collections for the year of dues amounted to $387.00; unpaid dues, $400.00.

Letters and communications were read by the Secretary, following which new business was taken up. Mr. Willcox spoke in regard to the new Constitution and By-Laws for the Chapters. Mr. Bebb considered it might be necessary to take some action in relation to the officers of the Chapter, holding over to the new annual meeting date as stated in the new Constitution and By-Laws, and by motion of Mr. Willcox this was referred to the Ways and Means Committee for report to the Council. Mr. Alden made some suggestions in regard to the possible new members in Tacoma.

Mr. Loveless proposed the following resolution regarding the death of Mr. James E. Webster:

"Since our last meeting one of our fellow members, Mr. James E. Webster, has passed into his new life.

"We desire to extend to his family our deepest sympathy and to express to them our assurance of the esteem in which we have always held him. We regret his early removal from his chosen field of work, in which he displayed ability of a high order, giving promise of a useful and successful future."

The resolution was adopted unanimously.

Mr. Baeder proposed the following resolution regarding the remission of dues to men serving in the Army and Navy:

"In accordance with the spirit of the times brought about by the conditions of the war, I beg to offer for the consideration of the Chapter the following resolution:

"Whereas, Our country being at war, some members of the Washington State Chapter of A. I. A., unselfishly and with the spirit of service to our country and mankind as a whole, have entered the service of our Government in the prosecution of the war; be it

"*Resolved*, That the Washington State Chapter A. I. A. hereby remits the dues of such members during the period of their service, expressing thereby our appreciation of their high service."

This resolution was carried unanimously.

Mr. Alden stated that he hoped the Chapter would not refuse to receive his dues, as he wished to continue paying them.

The President appointed Mr. Brust in the place of Mr. Coté on the Master Builders' Conference Committee.

Meeting adjourned at 10:30 p. m.

G. C. Field, *Acting Secretary.*

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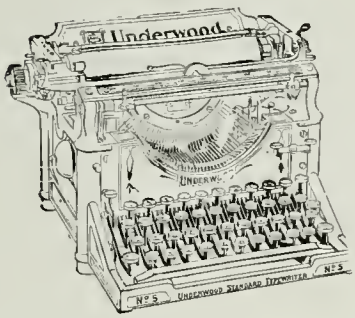

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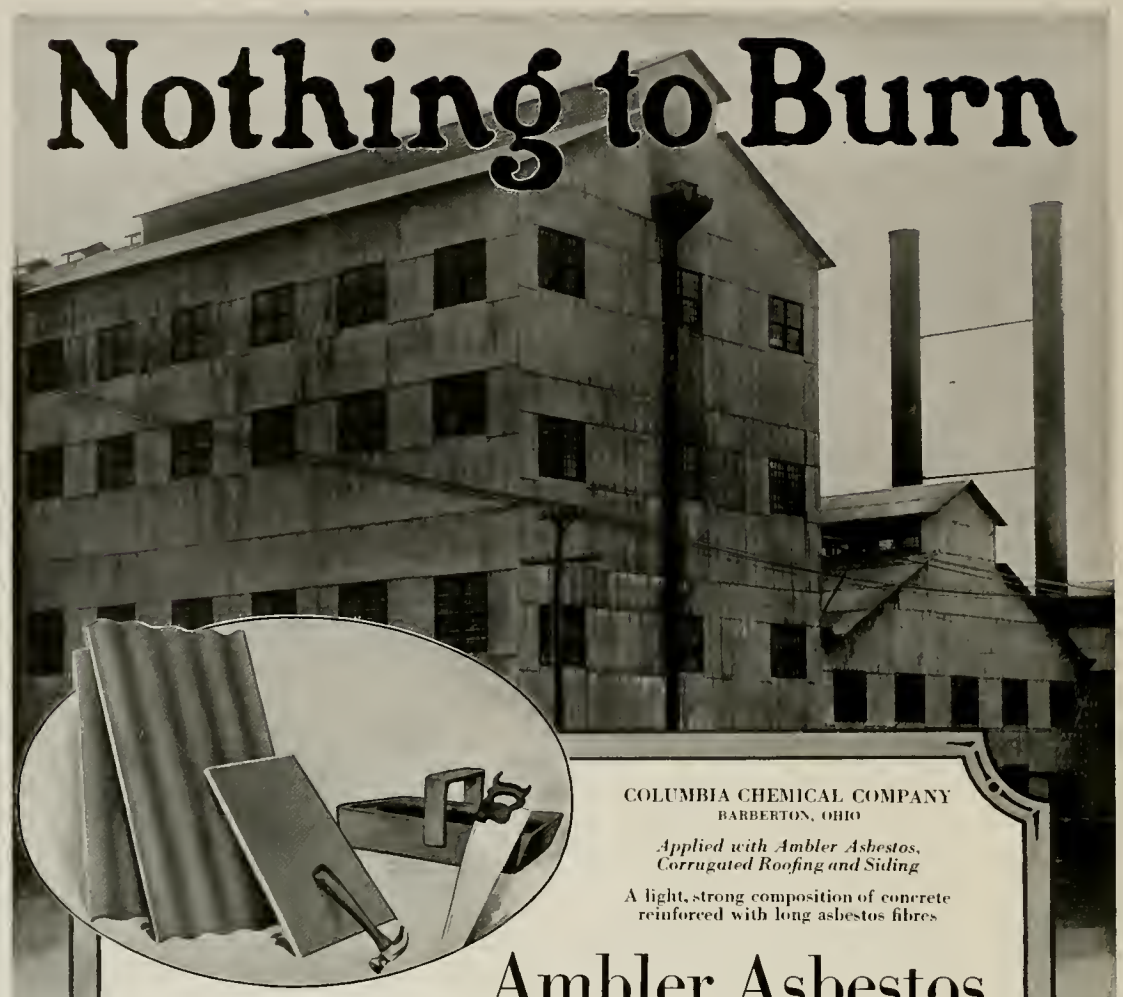

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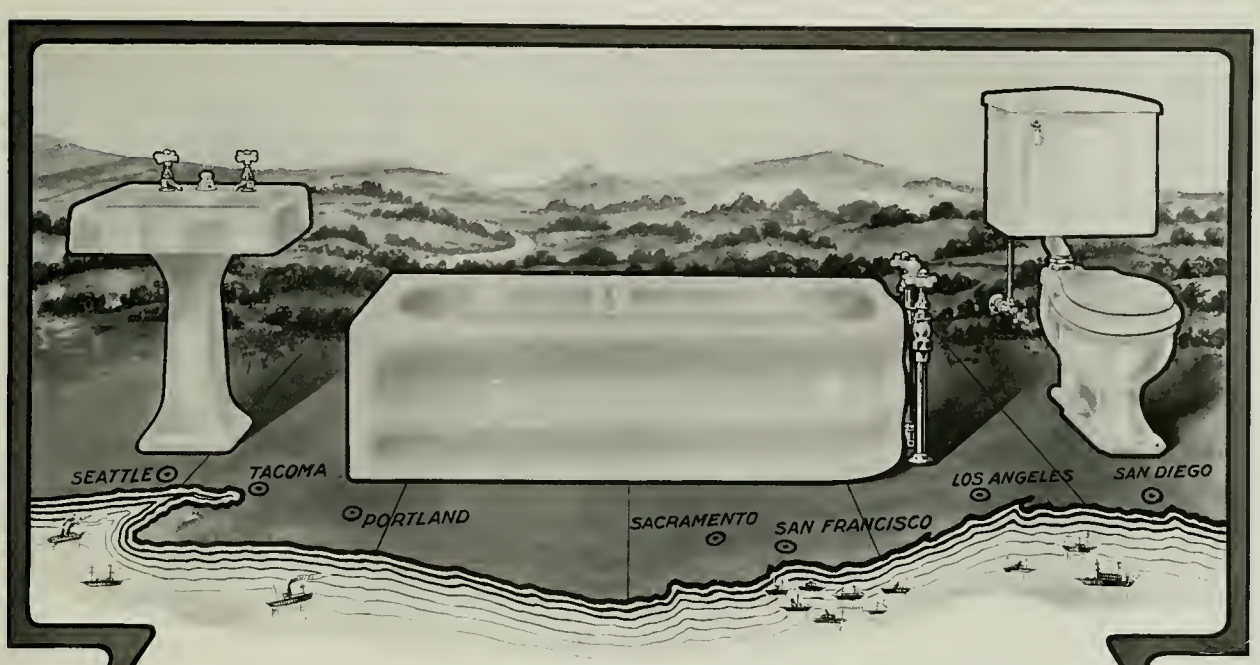

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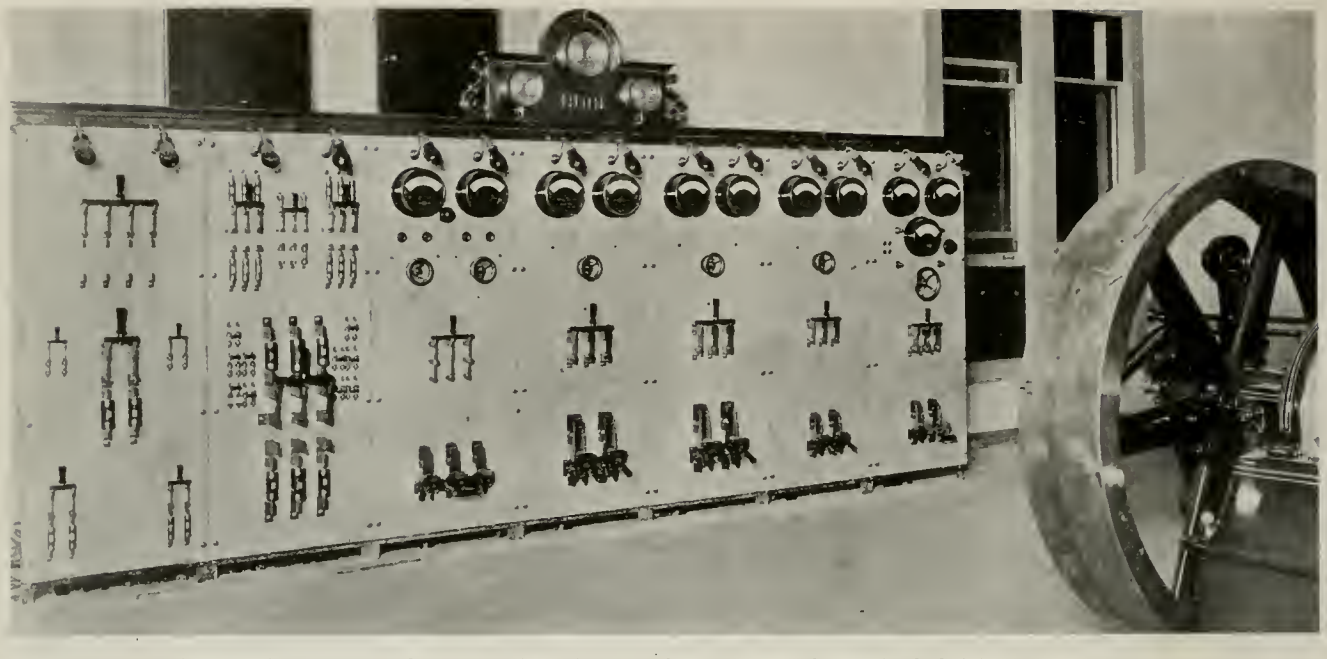

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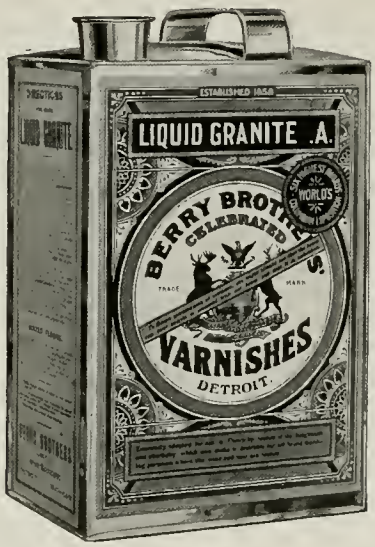

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EDITOR

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¶ Published in the interest of the architectural profession, on the first of each month, at 245 Mission Street, San Francisco. Entered as second class matter August 4, 1911. Subscription price in the United States and possessions, $5.00 a year: foreign and Canadian, $6.00 a year. Single copies, $1.00 each.

¶ Changes in, or copy for new advertisements, must reach the office of publication not later than the fifteenth of the month preceding issue. Advertising rates and any other information will gladly be given on application.

¶ The editor will be pleased to consider contributions of interest to the profession. When payment for same is desired, this fact should be stated.

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THE ARCHITECT

VOL. XIV SAN FRANCISCO, DECEMBER, 1917 NO. 6

SANTA MONICA HIGH SCHOOL, SANTA MONICA, CAL.
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The Ethical Value of School Architecture

By HORACE M. REBOK, Superintendent of Schools, Santa Monica, California

THE public school buildings of the twentieth century should be expressive of our finest and clearest conceptions of democracy. Our public schools embody the essence of our democracy—they are at the foundation of our modern state. Since the state exists for the welfare of its children, the public school therefore becomes both the heart and model for a true democracy. Hence in spirit and interpretation, the architecture of the public school should typify the liberal, hopeful, generous, and fraternal ideals of the state.

The public schools concern all of the people. Of all public buildings, the school alone is directly associated with the daily life of the masses. In plan, design, equipment, and ideals, school buildings contribute to the welfare of all, and in these things every member of society has both personal and financial interest. Only the best, therefore, is good enough for the children of all the people.

The practice of school architecture has been well established and standardized by experience. The problems of lighting, heating, ventilation, and sanitation have been settled by recognized authorities whose data are accessible to any architect, and there is no extenuating circumstance to excuse mistakes along any of these materialistic lines. This is commonplace knowledge.

With the above granted, the school plant of any community becomes at once a gauge of that community's enlightenment. School buildings not only reflect local public opinion, traditions and antecedents, but they also mirror the intelligence, faith and ideals of the leaders of the community upon whom happens to rest the responsibility of putting into brick, mortar and concrete the educational plant for which the community has expressed a willingness to stand.

A few days ago I passed a village high school that tells the story of civic ideals in its neighborhood. The building is laid out on box-like lines, and is otherwise characteristic of numerous school buildings erected during the past forty years in the Central West. The school yard is barren of plants or verdure, and the premises of the school are unkempt and common. The same condition has prevailed ever since the building

was erected ten years ago. This schoolhouse and its environment but reflect the mediocre intelligence, weak faith and low ideals of the people of the town. Whenever the ideals of the people of that community rise to better things, conditions in and around this high school will suddenly improve.

If the educational leaders of the community, the principal of the school, and members of the Board of Education, who are in control of this little high school, were willing to risk their "political scalps" and bring about a betterment in the architectural and landscape treatment for their school building and its grounds, they would impress the children, and through them, the parents of the community with new conceptions of civic improvements and civic pride; furthermore, the aesthetic environment of a majority of homes of the community would as suddenly change for the better.

GRAMMAR SCHOOL, GLENDORA, CAL. ALLISON AND ALLISON, Architects

The state enjoins upon the public school the obligation of teaching morality, truth, justice, patriotism, and a comprehension of the dignity of citizenship. In view of this, I hold it positively immoral for a community to house its school children in a homely, unkept building, or to assemble them daily upon commonplace, neglected school grounds. How can a child, quick as he always is to sense injustice, be expected to embrace noble sentiments when his eyes and, alas, sometimes his other senses, are daily offended by such an example of a community's infidelity, insincerity, or niggardliness, as is too often found in bad school architecture and in poorly planned and kept school premises. The child who comes to school from a well appointed home has the right to enter a school as good at least as the home from which he came, and the child who comes from a neglected home has the right to enter the best school the community and State can produce and such a school as will beget in him a conscious sense of the dignity of citizenship.

It never before has been so strongly impressed upon the public mind as during these days of stress, that whatever you would have appear in the nation's life you must first put into its schools. We are beginning to realize this philosophy in a very vital way, and as corollary to it, we can now see that whatever we would have appear in our home life we must first put into the schools; whatever we would have appear in the community life we must also first put into its public schools. School days are the impressionable days of human life.

GRAMMAR SCHOOL, LA CANADA, CAL.
ALLISON AND ALLISON Architects

DETAIL, MARENGO PRIMARY SCHOOL, ALHAMBRA, CAL.
ALLISON AND ALLISON, Architects

The child shapes his career from suggestion and interest. He will love the true, the beautiful and the good, if, during these wonderful years, he sees and hears, and lives in the environment of the true, the beautiful and the good. Therefore, to sum up: If the ideals of these sentiments are realized in terms of brick, stone and landscape treatment, their interpretation cannot but be impressed upon the child, and grow with the years and become a part of his character. No investment in education can pay a higher dividend than the investment in sound methods, good architecture, beautiful environment, for from these the citizenship of tomorrow gathers its ideals of the democracy responsible for such ennobling buildings; from these the child builds up, bit by bit, his conception of the dignity and beauty of citizenship in our Republic.

MARENGO PRIMARY SCHOOL, ALHAMBRA, CAL.
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Some Remarks Upon the Practice of Architecture

By D. C. ALLISON, A. I. A.

THE highest art in architecture involves the blending of the useful and the beautiful, disregarding no essential of the whole. It means attention to all the practical needs of the building, with no particular detail of plan or construction, and no element of permanence or safety sacrificed; it means that the building shall be so arranged and built as to be beautiful to look upon.

A certain amount of public taste is necessary to the continuous production of good architecture; an audience is essential, and the more enlightened and critical the audience, the greater the stimulus to good production on the part of the architect. At the same time the architect must supply the leadership necessary to educate the public in its taste, for he has the opportunity to influence its likes and dislikes for better or worse by the things he sets before it.

End of Science and Household Arts Building Santa Monica High School, Santa Monica, Cal.
ALLISON AND ALLISON, Architects

Surround a man with good pictures and good buildings and he will soon cease to care for the bad, and will come to want not only the good in pictures and buildings, but also beauty in the street, the park, and in the city as a whole; he will acquire taste, and in time the community will acquire taste, and good taste is an expression of enlightenment.

There has been a phenomenal advance made in the matter of architectural taste in this country in the past twenty-five years, both as to performance and appreciation. The Chicago Fair set before a large portion of our public for the first time an example of monumental planning and building that was entirely new to us in America, and since then the series of fairs at Buffalo, St. Louis and elsewhere, and the recent expositions at San Francisco and San Diego have continued to impress upon our minds the fact that beauty in architecture is a thing both worth while and attainable.

The great improvement in the design of our governmental and other public and private buildings, the interest of municipalities in procuring comprehensive city plans looking to their future development, the great amount of good domestic or residential architecture, the thought given to landscaping and gardening, are all indications that we are developing rapidly in this matter of taste. There are several immediate causes for the advance made. Coincident with the great commercial activity of the country, the growth of cities, the extension of railroad communications into new sections, and the resultant development, there has come into the country a wealth enabling our people to travel in foreign countries, to form new building ideals, and to acquire a basis of judgment that can be obtained as quickly in no other way. Americans of the middle and upper classes have become extensive travelers.

Then, during the era of which I speak, there have been added to the courses of study in some eight or ten of our great colleges and universities, departments for the teaching of architecture, which have each year turned out men with a knowledge of the theory of design and construction, many of whom have continued their studies abroad and brought back the fruits of further experience to apply in the building up of our own communities. These causes, together with the general and wide circulation of architectural literature, making available to every architect photographs and drawings of the best buildings of the world, have helped much to bring about the development.

View of Library Building Los Angeles State Normal School, Los Angeles, Cal.
ALLISON AND ALLISON, Architects

Such training and growing familiarity with the meaning of architecture in its broader sense, have placed the present-day practitioner in possession of a very different background from that held by the architect of a generation ago; and he needs it, for at no time in

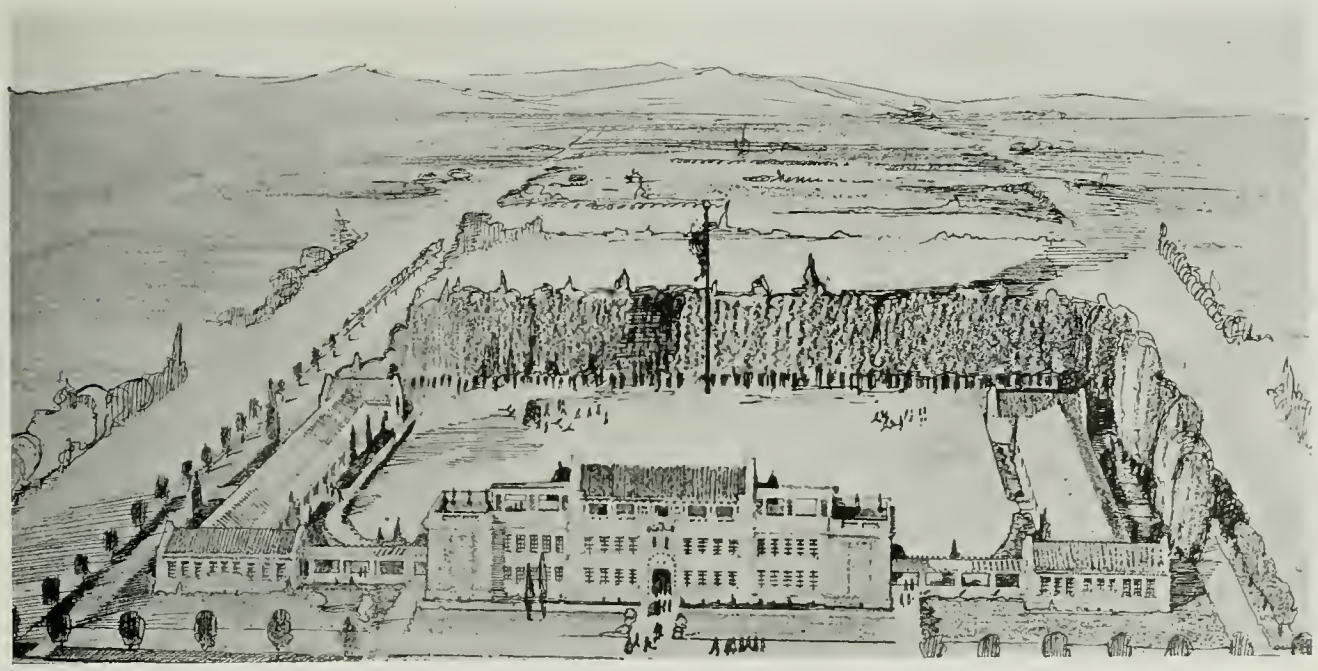
history has his responsibility to the public been greater, or have his opportunities for constructive service and leadership been greater. It is imperative, if the architect is to solve the complex problems put to him, that he be much more than the mere builder of a generation ago; he must also be a student, an artist, a business man, and a master mechanic, able to grasp and analyze with intelligence the requirements, both practical and æsthetic, of any building he is called upon to design.

High School, Wilmington District, Los Angeles, Cal.
ALLISON AND ALLISON, Architects

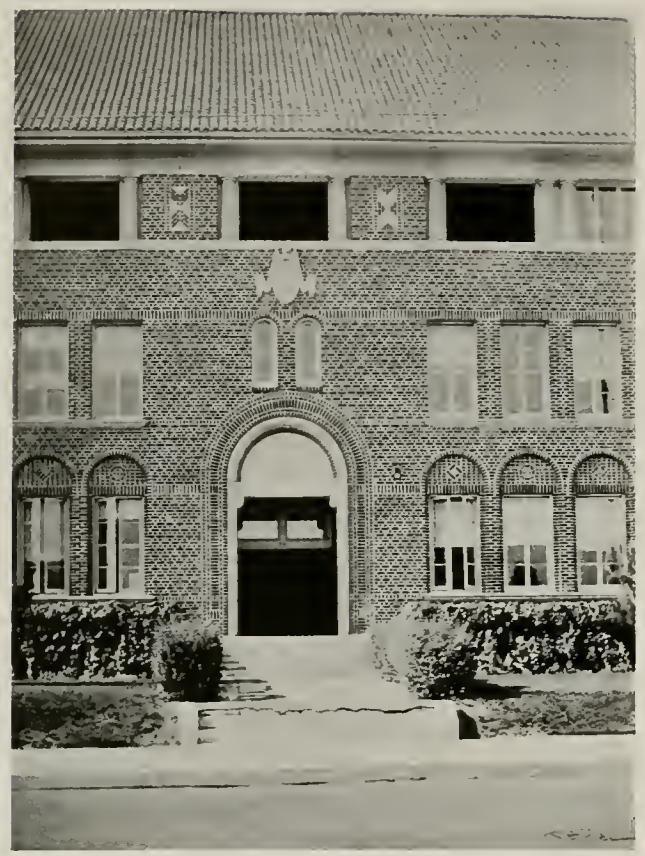
In this day of specialization, many men from force of circumstance come to be known more or less as specialists, from having done a large number of buildings of some certain type. But few architects care to be called specialists, for it is thus usually implied that they do successfully only one type of building. The fundamental principles of plan composition and design apply to all building, and the architect properly educated in his profession is able to analyze and solve the plan, structural and æsthetic requirements of his problem, whatever it may be. He has at his service when necessary the specialists in various phases of engineering to supplement and complete his work in detail, but with him lie the big decisions as to the form the building shall take—its constructive policy, the selection of materials, in fact, the *design*—the whole conception and development from the paper stage until it is handed over completed to the owner.

The practice of architecture is a profession, as is law or medicine, and no professional man carries greater responsibility to the public in matters of health and safety, and none nearly so great in terms of money, as does the architect; and the good architect, like the good lawyer, is able to earn his fee for the client. The standard fee for full architectural services on general work throughout the country is six per cent of the cost of the building. It is a fee at which the practitioner can do justice to both his client and himself, and make a living; and he cannot do so for less. Architects who are able to command a good price through giving proper service, always get it, as do other people; while those who work for small pay do so not from any motive of benevolence, but from inability to demonstrate by their work that a proper fee to them is a good investment for the owner.

It is poor economy that begins on the architect who makes the plans. If a thoroughly good plan be obtained to start with, the building will have value even if poorly built; but when one sets out with a poorly conceived and cheaply made set of plans, one cannot get a creditable building, no matter how much be spent on construction. It would be money saved to start with a good plan if it cost ten or twenty per cent, rather than build from a poor plan which could be obtained for nothing. There is nothing more stupid than to attempt to bargain and dicker with a good architect about his commission; one should get the best man



Preliminary Sketch for Completed Group, High School Wilmington District, Los Angeles, Cal.
ALLISON AND ALLISON Architects



Entrance Detail, High School, Wilmington District, Los Angeles, Cal.
ALLISON AND ALLISON Architects

Redondo Union High School, Redondo Beach, Cal.
ALLISON AND ALLISON, Architects

available and pay his price. It is one of the very smallest items in the cost of a building at the most, and as something must be paid, the possible saving of a per cent or two in the commission is too insignificant to dispute over, when account is taken of the risk of imperiling the whole improvement by the purchase of cheap architecture from a poorly qualified representative of the profession.

It is generally admitted that of all public buildings, none lies so close to our national life and development as does the school, and for this reason no type of building has been the subject of so much special investigation and discussion as to its practical requirements.

To the layman, a modern school building may appear to be very simple and a more or less cut and dried affair in its design and plan, because of the fact that such matters as lighting, heating, ventilation and sanitation are so well standardized, and the engineering data so conveniently compiled and accessible to every architect. The idea is quite prevalent that when these elements are properly cared for and the whole made fairly presentable to the eye, all has been done that should be done toward satisfying the possibilities of the problem. While these elements are admittedly the biggest consideration entering into the construction of schools, yet they by no means represent the whole responsibility in the matter. A school building may satisfy perfectly and completely every utilitarian demand, and be extremely ugly to look upon; or it may satisfy the same demands exactly as

(Continued on Page 406)

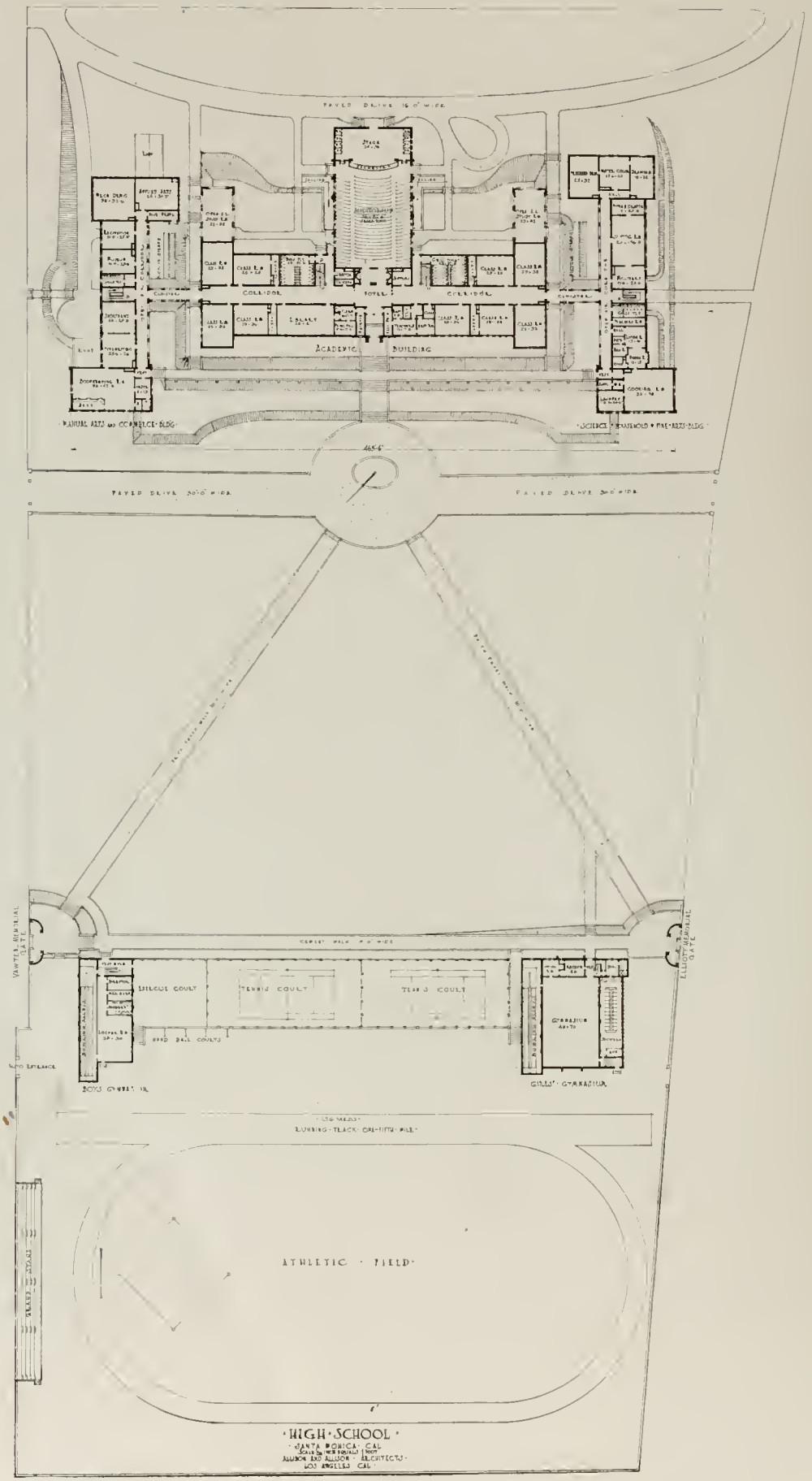
GARVEY AVENUE GRAMMAR SCHOOL, ALHAMBRA, CAL.
ALLISON AND ALLISON, Architects

GENERAL VIEW SANTA MONICA HIGH SCHOOL, SANTA MONICA, CAL.

ALLISON AND ALLISON, Architects

End Pavilion Santa Monica High School, Santa Monica, Cal.
ALLISON AND ALLISON Architects

ENTRANCE DETAIL, SANTA MONICA HIGH SCHOOL, SANTA MONICA, CAL.
ALLISON AND ALLISON, Architects



TOPOGRAPHIC PLAN, HIGH SCHOOL, SANTA MONICA, CAL.

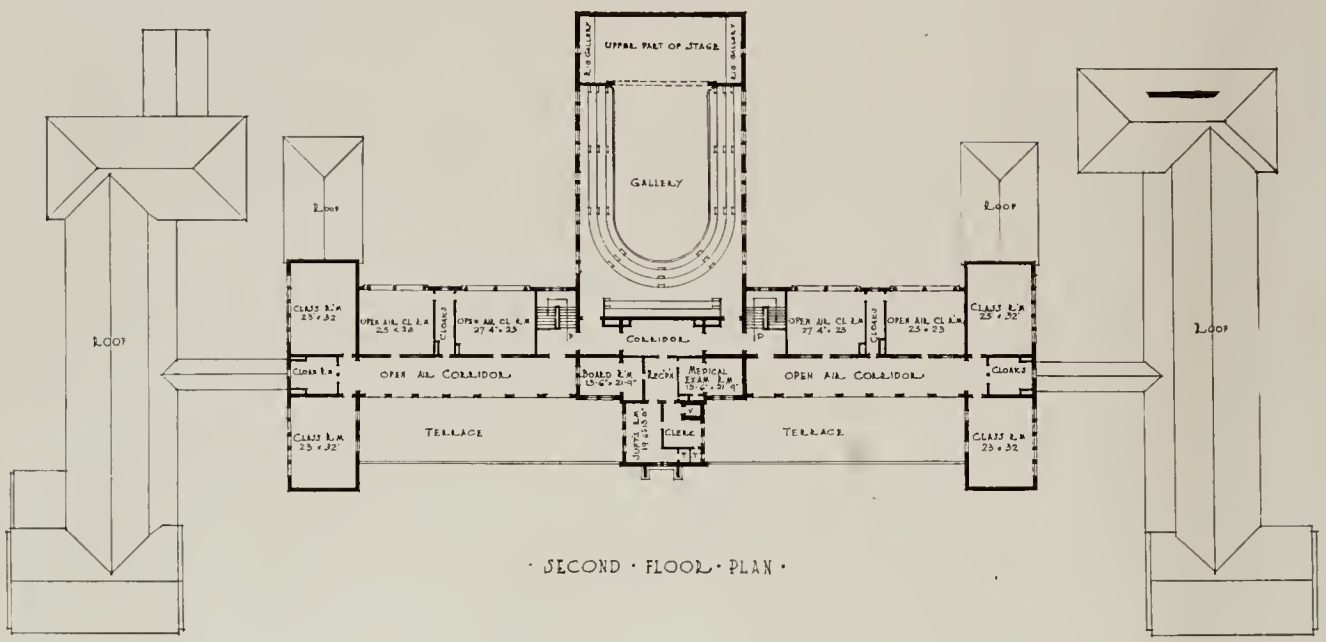
ALLISON AND ALLISON, Architects

GENERAL VIEW

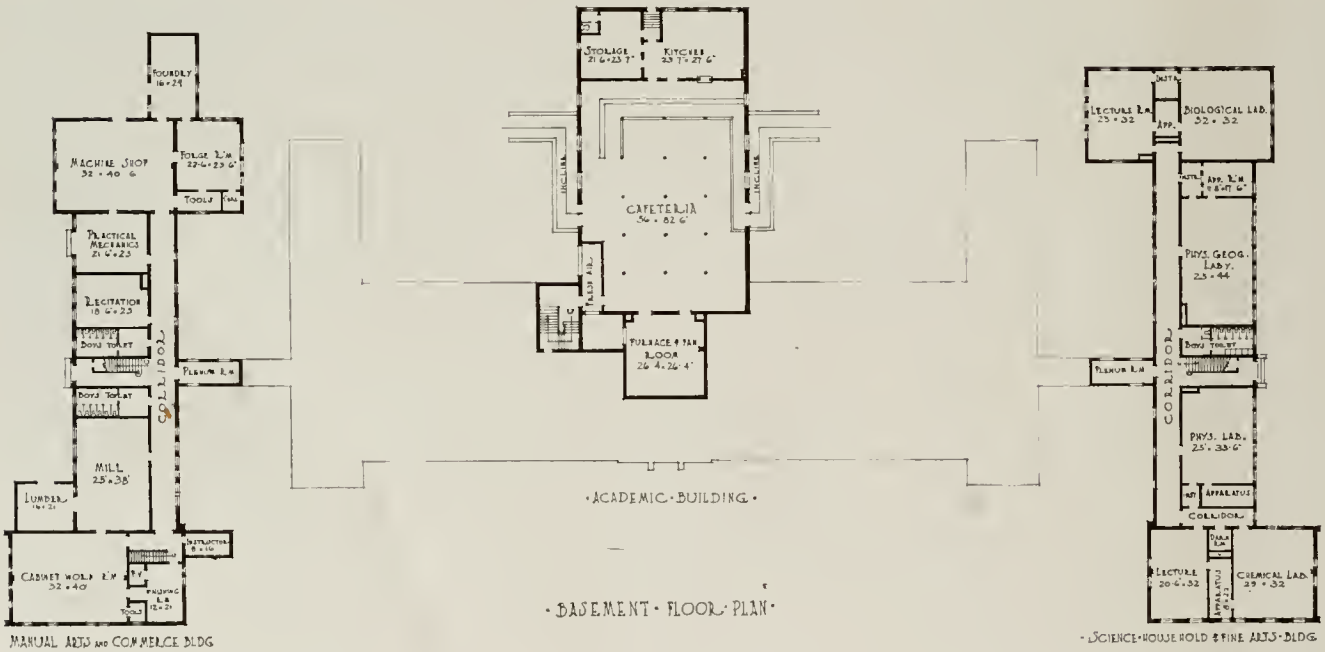
ELLIOTT MEMORIAL GATE

HIGH SCHOOL GROUP, SANTA MONICA, CAL.

ALLISON AND ALLISON Architects



· SECOND · FLOOR · PLAN ·



· ACADEMIC · BUILDING ·

· BASEMENT · FLOOR · PLAN ·

MANUAL ARTS AND COMMERCE BLDG

· SCIENCE · HOUSEHOLD & FINE ARTS · BLDG

SANTA MONICA HIGH SCHOOL, SANTA MONICA, CAL.

ALLISON AND ALLISON Architects

OPEN AIR STUDY HALL

DETAIL OF GATE

DETAIL OF GATE

SANTA MONICA HIGH SCHOOL, SANTA MONICA, CAL.

ALLISON AND ALLISON, Architects

COMPETITION ANNOUNCEMENT

The Board of Control of the State of California announces to all Architects who are citizens of the United States:

That a Competition has been instituted for the selection of an Architect to design and supervise the construction of State Buildings to be located in the City of Sacramento, California for the construction, equipment and furnishing of which the people of the State of California have voted $3,000,000.00 in bonds, the site having been donated by the City of Sacramento.

Under the law, the State Architect shall act as architectural advisor in connection with the Competition.

This Competition will be conducted in two stages.

The first stage is open to all Architects, citizens of the United States, who have had the necessary experience, subject to the conditions prescribed in the Program of the Competition.

The second stage will be open to eight Architects selected by the Jury from those competing in the first stage.

No Competitor shall receive any remuneration unless chosen by the Jury and submitting drawings in the second stage.

The Program for this Competition is approved by the San Francisco Sub-Committee on Competitions of the American Institute of Architects.

Architects desiring to compete must file with George B. McDougall, State Architect, Forum Building, Sacramento, California, a written request for a copy of the Program. On December 15, 1917, copies will be mailed simultaneously to all Architects from whom written requests for same have been received. Copies will be mailed to Architects making written requests for same after December 15, 1917, at the time of the receipt of such later requests.

(Signed) BOARD OF CONTROL OF THE STATE OF CALIFORNIA.

Marshall De Motte, Chairman.
Clyde L. Seavey.
Edward A. Dickson.
Members of Board of Control.
P. J. Tehaney,
Secretary.

Dated: November 1, 1917.

APARTMENTS

GENERAL SCIENCE ROOM

PRACTICAL MECHANICS ROOM

COOKING CLASS ROOM

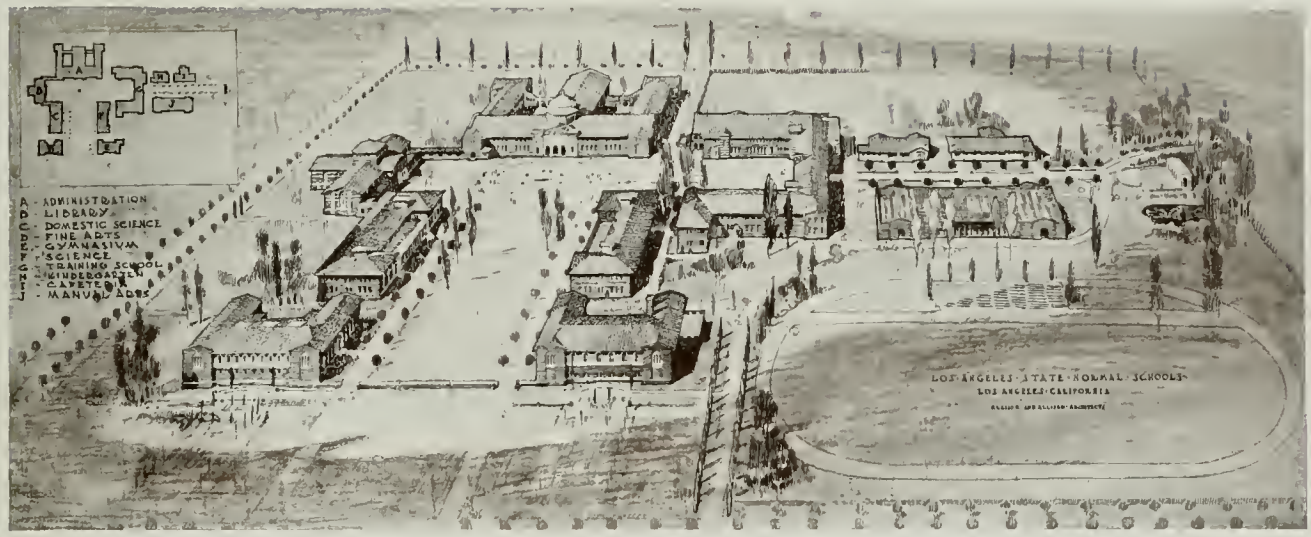
SANTA MONICA HIGH SCHOOL, SANTA MONICA, CAL.

ALLISON AND ALLISON. Architects

DETAIL MAIN ENTRANCE

ADMINISTRATION BUILDING, LOS ANGELES STATE NORMAL SCHOOL

ALLISON AND ALLISON Architects



BIRDSEYE PERSPECTIVE

ADMINISTRATION BUILDING

CORNER IN TRAINING SCHOOL COURT

LOS ANGELES STATE NORMAL SCHOOL, LOS ANGELES, CAL.

ALLISON AND ALLISON Architects

DETAIL, EAST ENTRANCE DOMESTIC ARTS BUILDING

DETAIL, MAIN ENTRANCE GYMNASIUM BUILDING

LOS ANGELES STATE NORMAL SCHOOL, LOS ANGELES, CAL.

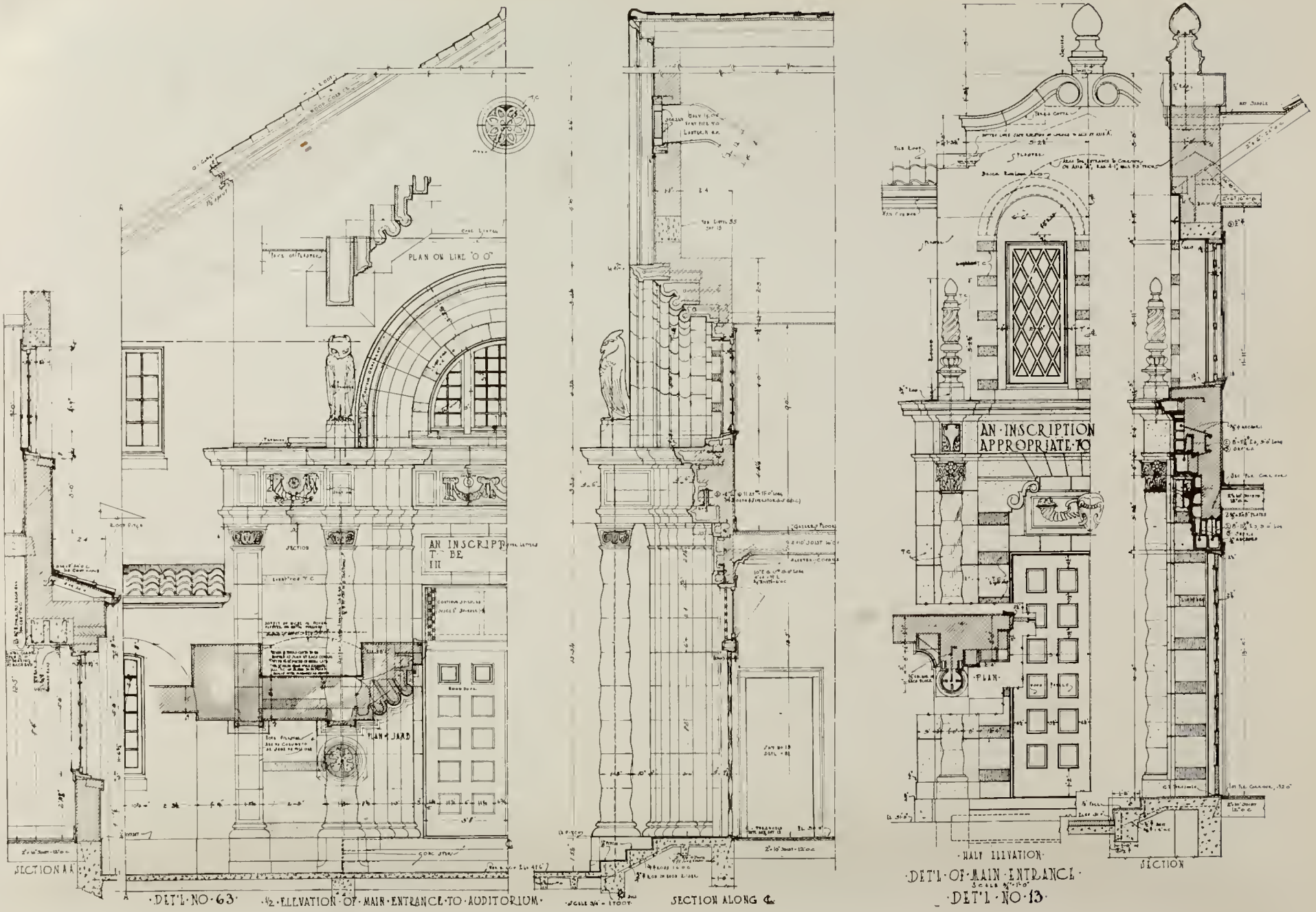
ALLISON AND ALLISON, Architects

FINE ARTS BUILDING

DETAIL, TRAINING SCHOOL FORECOURT

LOS ANGELES STATE NORMAL SCHOOL, LOS ANGELES, CAL.

ALLISON AND ALLISON, Architects



·DET'L·NO·63· ·½·ELLVATION·OF·MAIN·ENTRANCE·TO·AUDITORIUM· SECTION ALONG ℄

·DET'L·OF·MAIN·ENTRANCE·
·DET'L·NO·13·

UNION HIGH SCHOOL, PALO ALTO, CAL.
ALLISON AND ALLISON, Architects

KINDERGARTEN AND CAFETERIA BUILDINGS

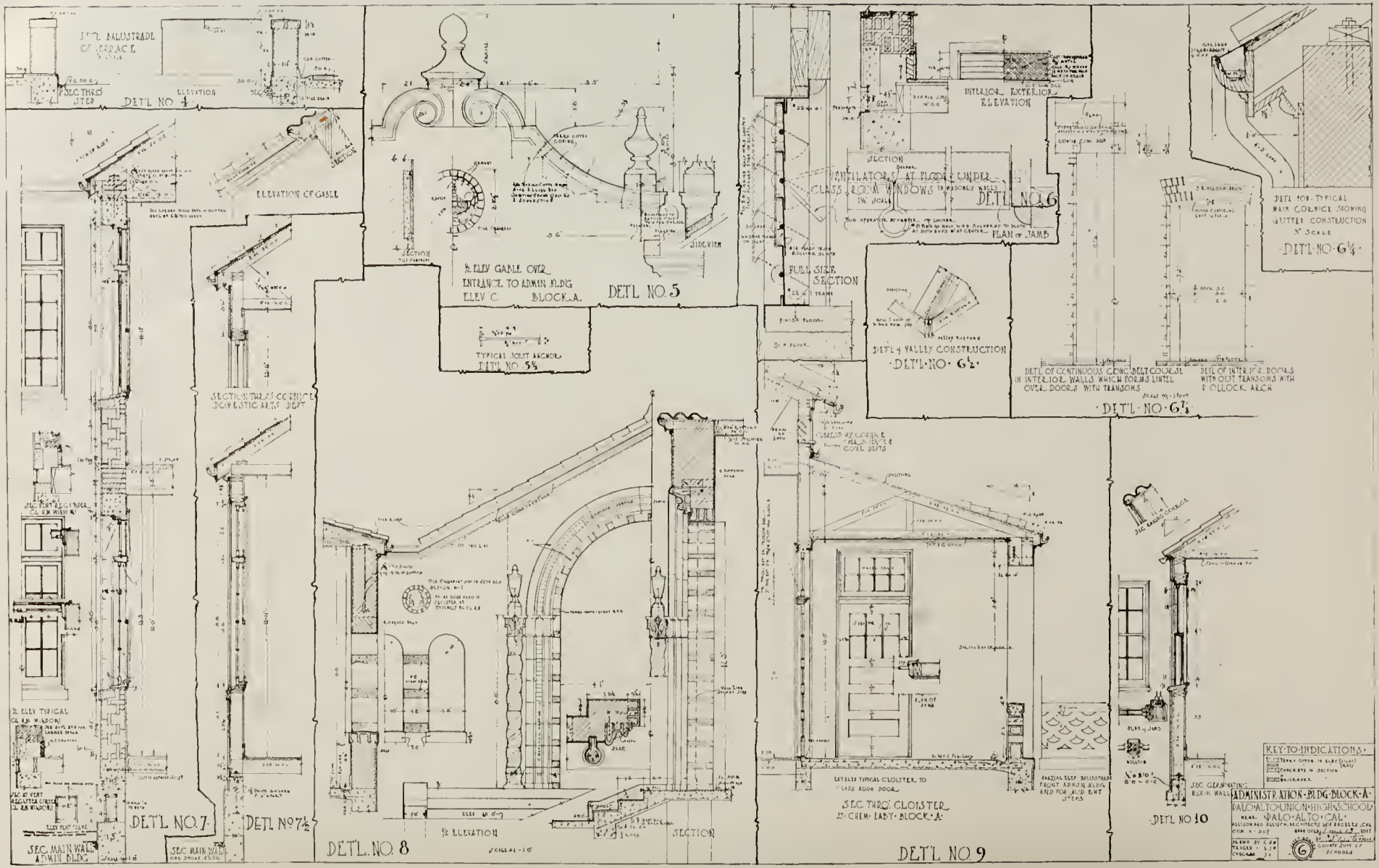
END OF ADMINISTRATION BUILDING

SCIENCE BUILDING

LOS ANGELES STATE NORMAL SCHOOL, LOS ANGELES, CAL.

ALLISON AND ALLISON, Architects

GENERAL VIEWS, GRAMMAR SCHOOL NO. 1, GLENDORA, CAL.
ALLISON AND ALLISON Architects


DET'L BALUSTRADE OF TERRACE
SEC THRO STEP
ELEVATION
DET'L NO 4
ELEVATION OF GABLE
SECTION
SECTION THRU CORNICE DOMESTIC ARTS DEPT
DET'L NO 7
DET'L NO 7½
SEC MAIN WALL ADMIN BLDG
½ ELEV GABLE OVER ENTRANCE TO ADMIN BLDG ELEV C BLOCK A.
DET'L NO 5
SIDE VIEW
TYPICAL JOIST ARCHOL DETL NO 5½
INTERIOR EXTERIOR ELEVATION
SECTION
VENTILATORS AT FLOOR UNDER CLASS ROOM WINDOWS IN MASONRY WALLS
DET'L NO 6
PLAN OF JAMB
FULL SIZE SECTION
DET'L OF VALLEY CONSTRUCTION
DET'L NO 6½
DET'L OF CONTINUOUS CONC BELT COURSE IN INTERIOR WALLS WHICH FORMS LINTEL OVER DOORS WITH TRANSOMS
DET'L OF INTERIOR DOORS WITH OUT TRANSOMS WITH SEGMENTAL ARCH
DET'L NO 6¾
DETL FOR TYPICAL MAIN CORNICE SHOWING GUTTER CONSTRUCTION
DET'L NO 6¼
½ ELEVATION
SECTION
DET'L NO 8
SEC THRO CLOISTER AT CHEM LAB'Y BLOCK A
DET'L NO 9
SEC GERMINATING ROOM WALL
DET'L NO 10
KEY TO INDICATIONS
ADMINISTRATION BLDG BLOCK A
PALO ALTO UNION HIGH SCHOOL
PALO ALTO CAL

UNION HIGH SCHOOL. PALO ALTO. CAL.

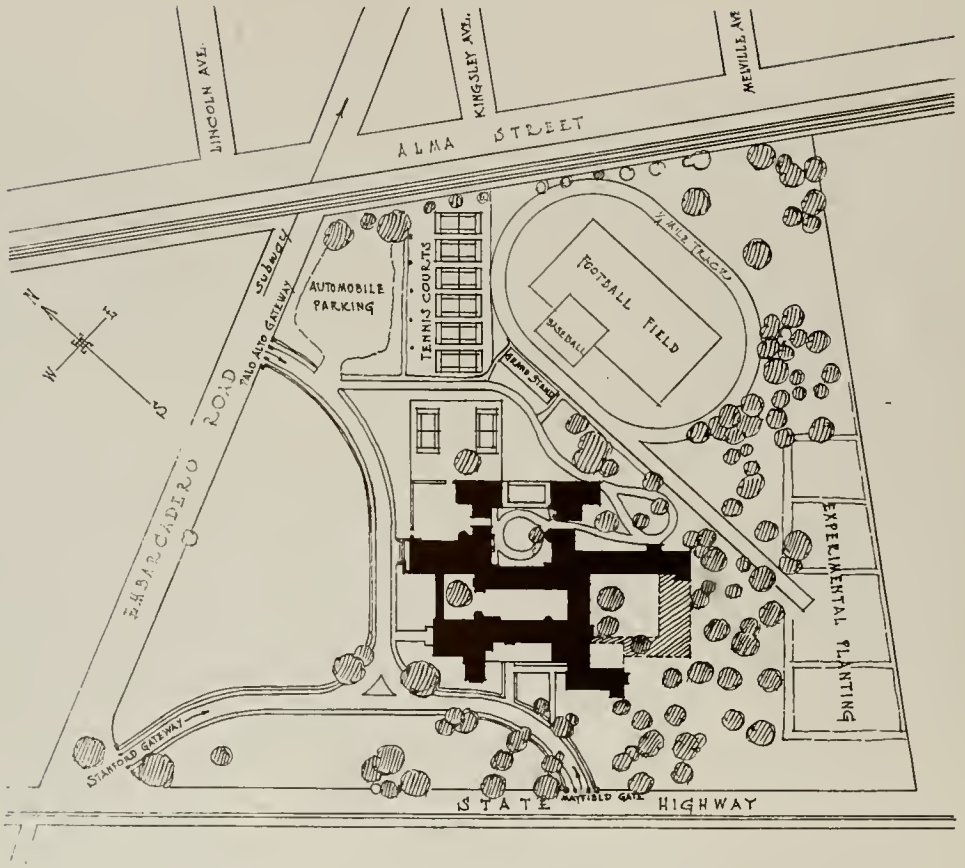
ALLISON AND ALLISON. Architects

PERSPECTIVE VIEW ADMINISTRATION BUILDING

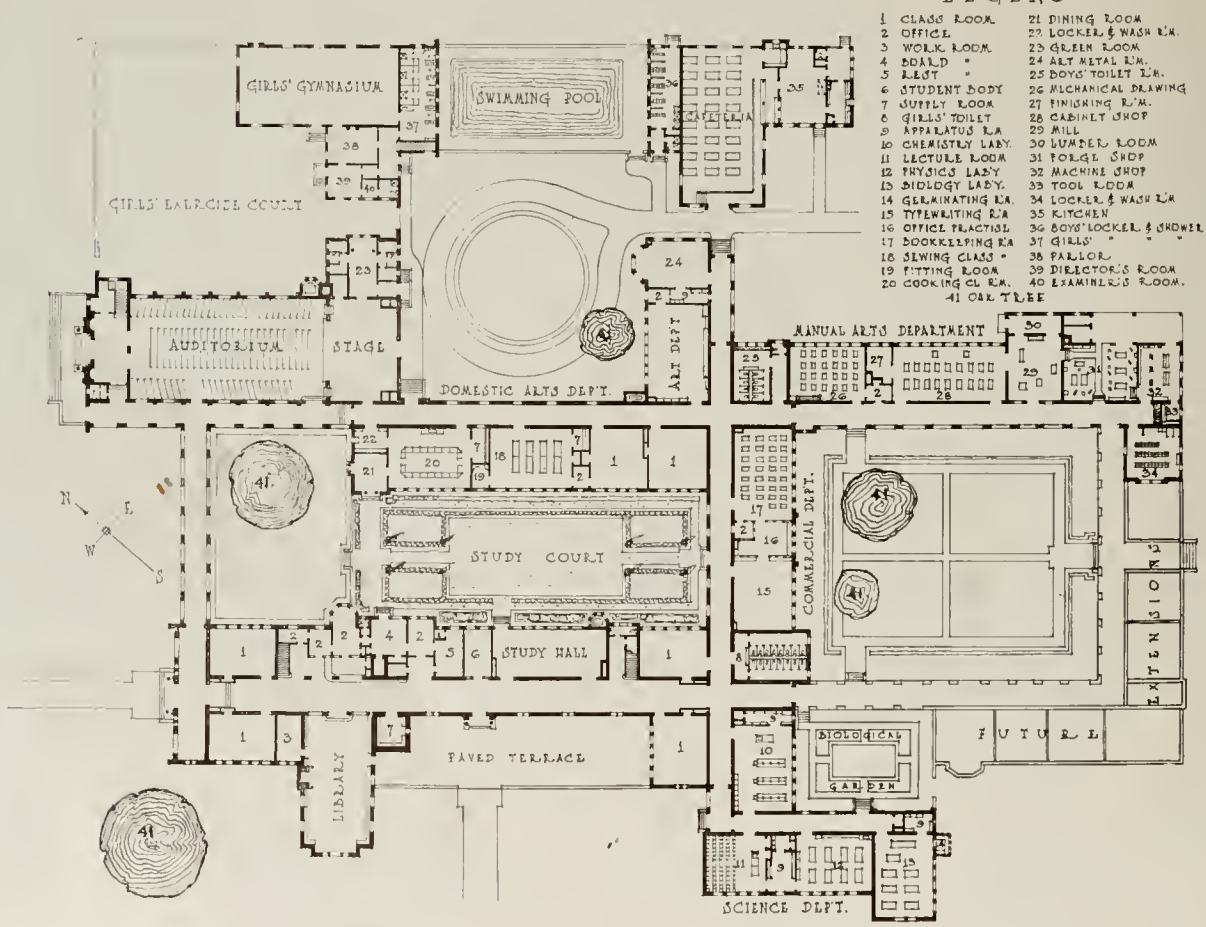
PERSPECTIVE VIEW AUDITORIUM

PALO ALTO UNION HIGH SCHOOL, PALO ALTO, CAL.

ALLISON AND ALLISON, Architects



TOPOGRAPHIC PLAN OF SITE AND IMPROVEMENTS (SITE CONTAINS THIRTY ACRES)



MAIN FLOOR PLAN

UNION HIGH SCHOOL, PALO ALTO, CAL.

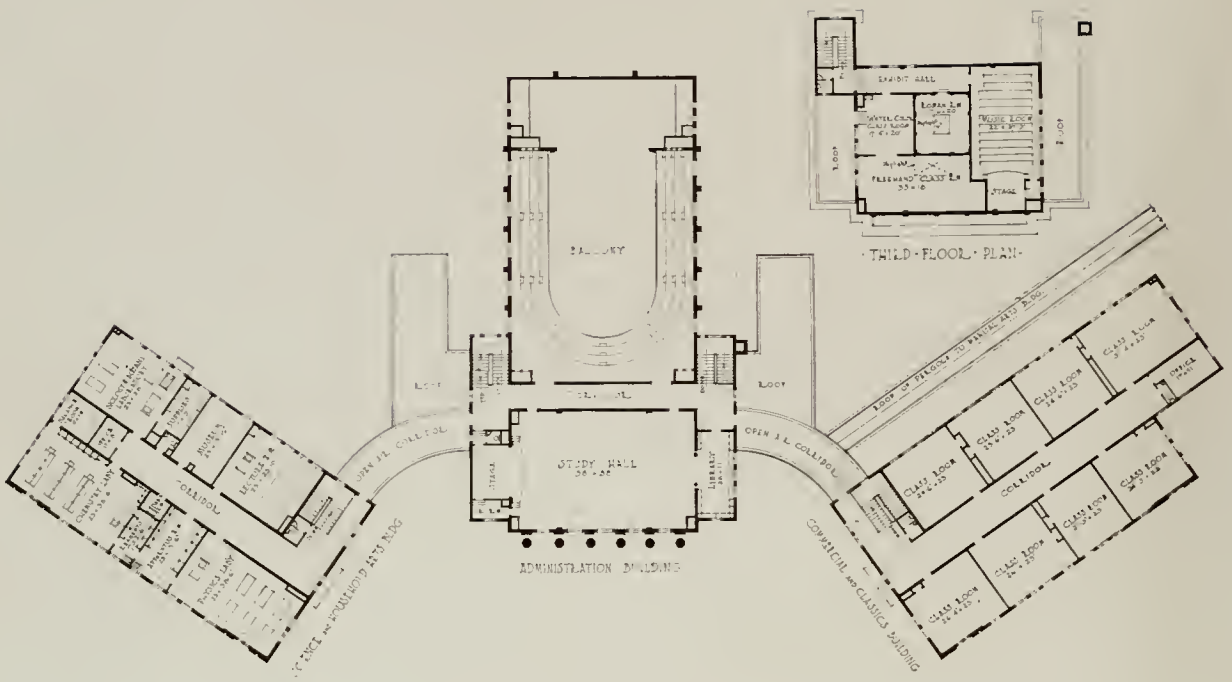
ALLISON AND ALLISON, Architects

GRAMMAR SCHOOL, COLTON, CAL
ALLISON AND ALLISON Architects

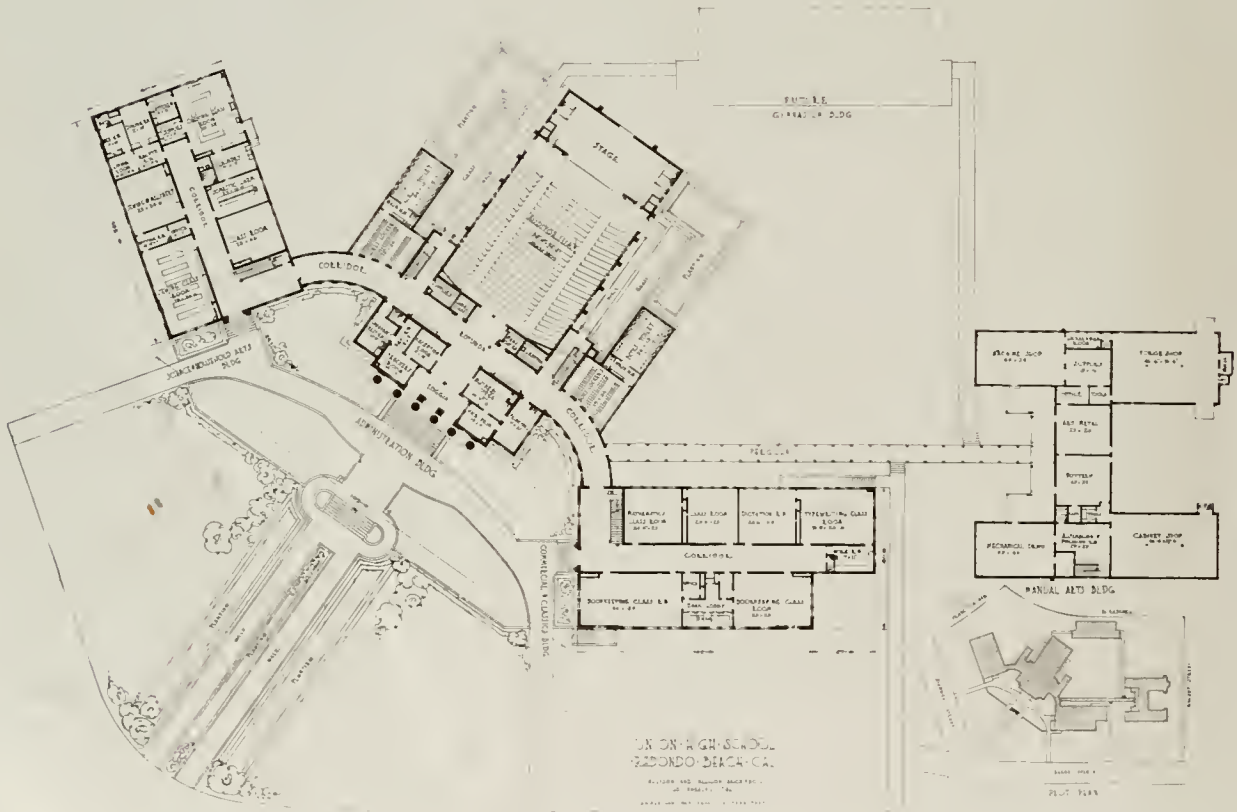
DETAIL, FREMONT AVENUE SCHOOL, ALHAMBRA, CAL.
ALLISON AND ALLISON, Architects

ENTRANCE TO ATHLETIC FIELD, SANTA MONICA HIGH SCHOOL, SANTA MONICA, CAL.
ALLISON AND ALLISON Architects

ENTRANCE TO GRAMMAR SCHOOL, CORONA, CAL.
ALLISON AND ALLISON, Architects



SECOND AND THIRD FLOOR PLAN



FIRST FLOOR PLAN

UNION HIGH SCHOOL, REDONDO BEACH, CAL.

ALLISON AND ALLISON Architects

SANTA PAULA HIGH SCHOOL, SANTA PAULA, CAL.
ALLISON AND ALLISON Architects

ENTRANCE DETAIL, REDONDO UNION HIGH SCHOOL, REDONDO BEACH, CAL.
ALLISON AND ALLISON Architects

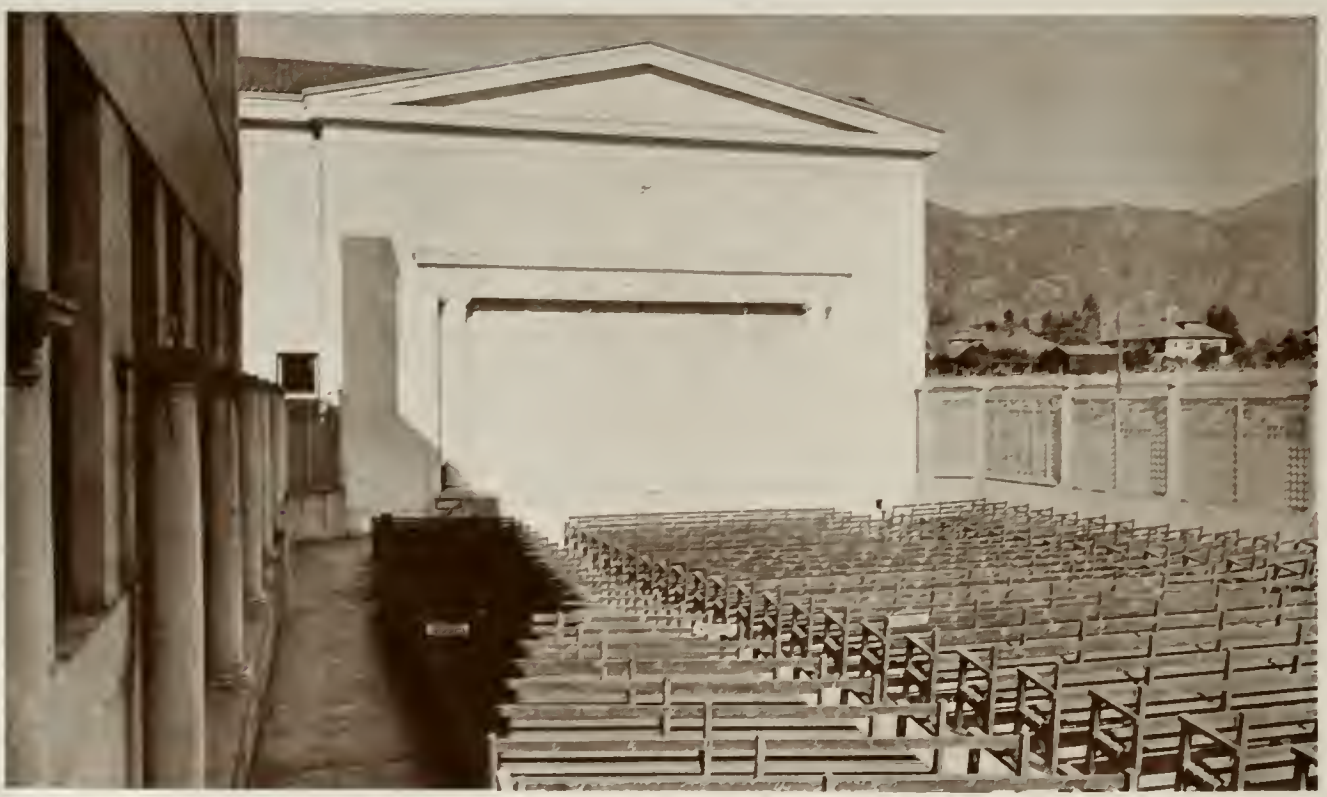
GENERAL VIEW

DETAIL MAIN ENTRANCE

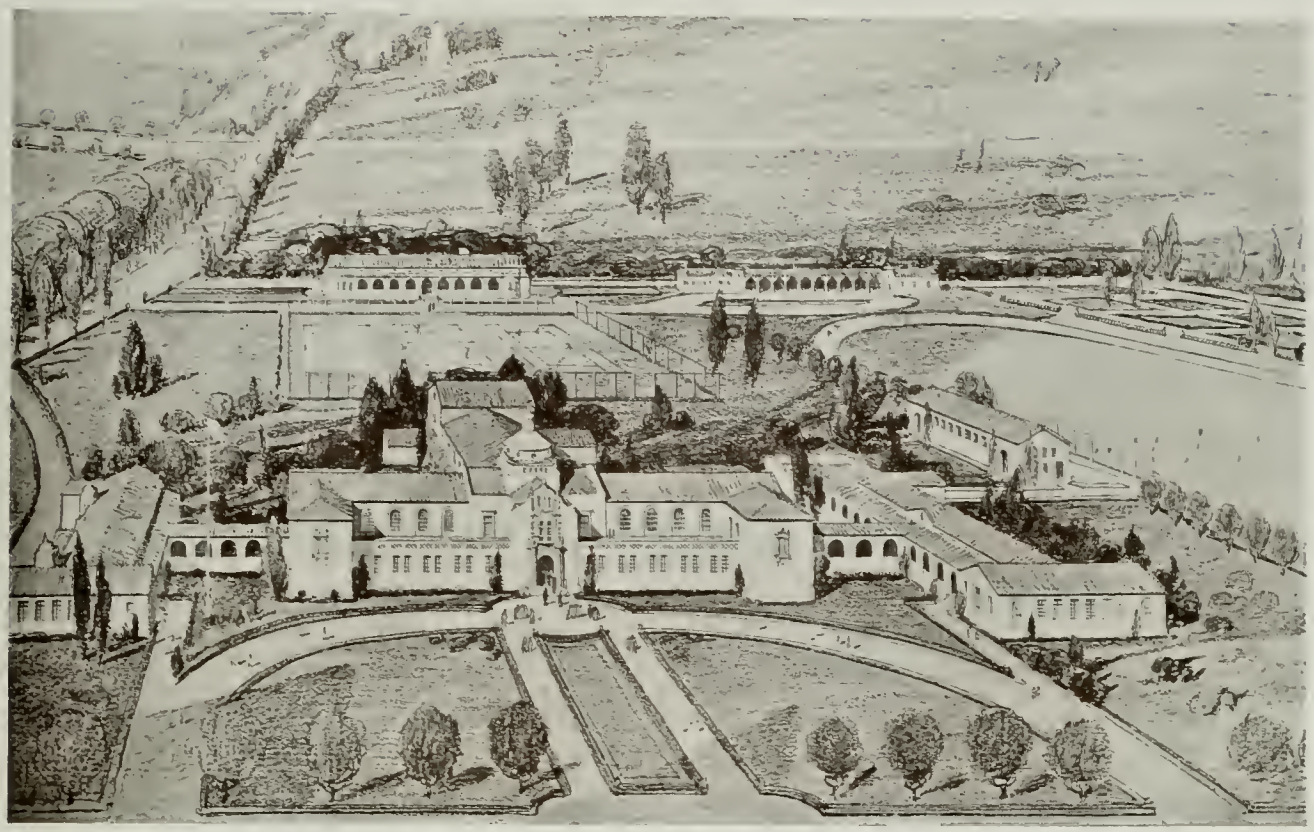
VAN NUYS HIGH SCHOOL, VAN NUYS, CAL.

ALLISON AND ALLISON Architects

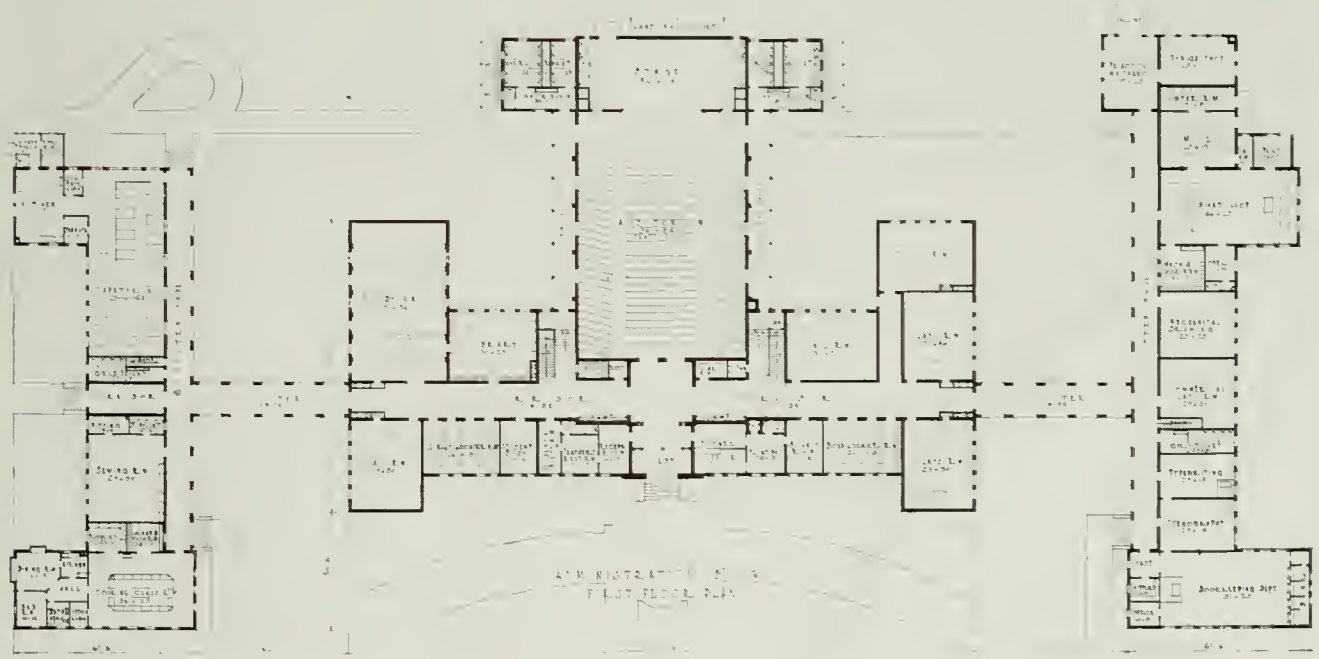
UNCOMPLETED CENTRAL AVENUE GRAMMAR SCHOOL, SANTA MONICA, CAL.
ALLISON AND ALLISON Architects



OPEN AIR AUDITORIUM, HIGH SCHOOL, MONROVIA, CAL.
ALLISON AND ALLISON Architects

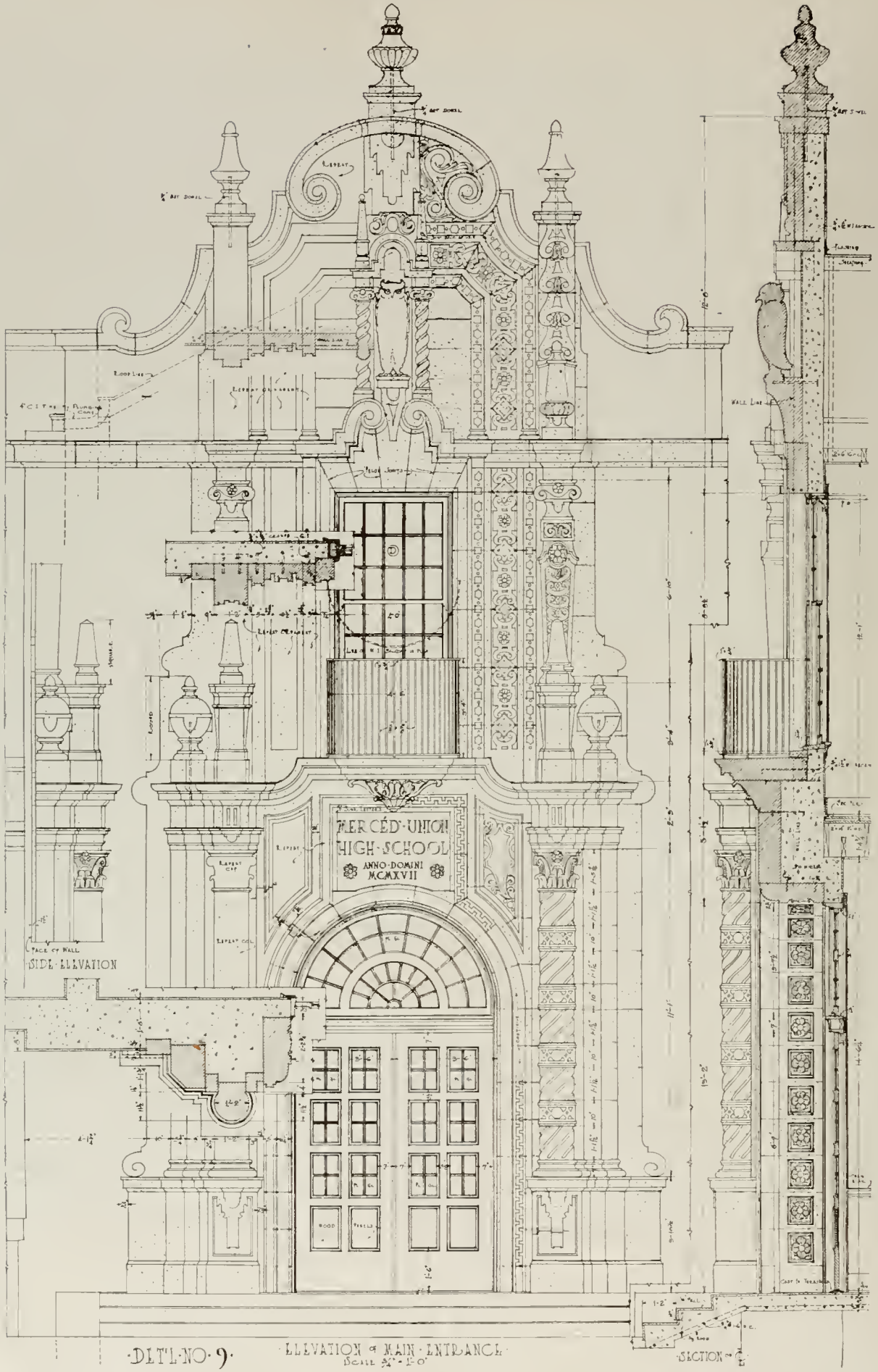


UNION HIGH SCHOOL BUILDINGS, MERCED, CAL.



FIRST FLOOR PLAN UNION HIGH SCHOOL BUILDINGS, MERCED, CAL.

ALLISON AND ALLISON Architects



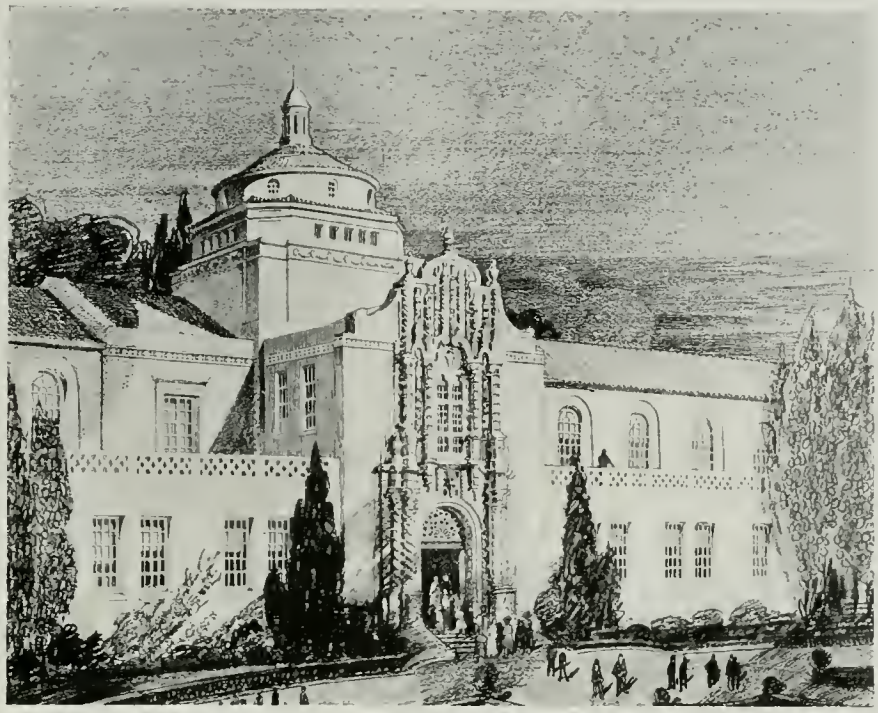
UNION HIGH SCHOOL, MERCED, CAL.

ALLISON AND ALLISON Architects

Some Elementary Factors in Providing School Accommodations

By ALBERT SHIELS, City Superintendent of Schools, Los Angeles, Cal.

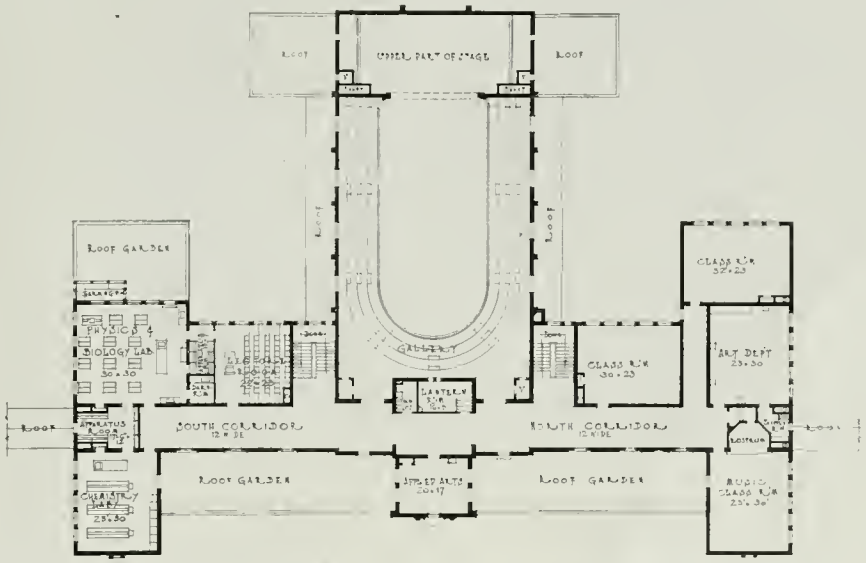
ARCHITECTS, no matter how well they know their business, have learned that their own plans are subject to revision and approval by those of little technical skill. Superintendents, no matter how thoroughly familiar they may be with the accommodations and facilities which a modern school building requires, must also realize that the law rarely permits the final decision on these things to be determined by them.



Union High School Buildings, Merced, Cal. ALLISON AND ALLISON, Architects

It is the members of a board of trustees or a board of education who have the legal responsibility for passing upon plans and appropriating money. The most intelligent board members will depend in very large measure upon the opinions both of the superintendent and the architect. But they cannot escape the direct responsibility which the law gives them of final decision. Therefore, every board member ought to understand a few elementary factors involved in the building of a school, not that he may use his limited knowledge to hamper others, but that he may more intelligently understand their explanations and suggestions.

Had some members of the board of education of our country possessed even a limited knowledge of these elemental factors, we would not today find school buildings suited for an Alaskan climate erected in a community that has never known a frost; we should not, as sometimes happens, see a huge, ugly red box made to do duty as a school; no longer would grounds be purchased in inappropriate localities and in insufficient amount; programs for the extension of school facilities would be made, not for a year or two merely, but for five or ten years ahead. Most important, perhaps, members of boards of education, once possessed of such knowledge, would realize that the planning and erection of a school building are technical matters and that it is insufficient that our school buildings be designed by builders of unblemished reputation, but destitute of architectural training.



Second Floor Plan, Union High School Building, Merced, Cal. ALLISON AND ALLISON Architects

In American cities no one can with any degree of certainty say in what direction a city will spread. Nevertheless, in a rapidly growing community it is safe to appropriate periodically a sum of money for the purchase of school sites at low prices, the amount so expended to be a fixed per cent of the total funds available for the year. If there be a standard for schools in terms of accommodation, whether of sittings or class rooms, a board of education can establish corresponding standards for the size of the site. In such case, sites of not less than two acres, or larger for larger groups, could be purchased before the increase of residential population in neighborhoods made prices excessive. It will be at once objected that this means that money will be sunk in land and that therefore it would be idle for a long period of time with corresponding loss of interest, even without tax payments. This would not be true if there were a definite, intelligent policy in buying, for two good reasons. Interest loss on such an investment would be compensated for many times by the saving in the increased value of land after purchase. If the plot itself were a good one and carefully selected, it would become a center for the growth of the future residential district and add greatly to the value of the tract for assessment purposes.

PERSPECTIVE VIEW OF FORECOURT, WHITTIER COLLEGE, WHITTIER, CAL.
ALLISON AND ALLISON, Architects

The history of American schools is a distressing repetition of an old story. While the town was yet small, no one had the vision to buy for the future. As it increased in population, all available funds had to be expended for current growth. Finally when the town became a city and the needs became critical, plots of insufficient size were purchased at exorbitant prices. The plots were too small to accommodate properly the children and the prices were too high to permit any additional purchases. Few men plan their own lives so poorly as a town plans the purchase of land for school development.

To those who fear that large plots are too expensive, it is well to remember that on a large plot a single-story building can be erected. This means increased safety for children, decreased cost of construction and saving of waste space for necessary stairways. But a single-story building cannot be erected on a small plot and yet permit garden and play space. Moreover, if a school plot is surrounded by tall buildings, the rooms will be improperly lighted, unless there is abundant room about the building. Therefore, boards of education should initiate some continuous policy of intelligent land purchase. At any time every board of education should be the owner of plots of suitable size on which school buildings are not yet erected. Each year this land would show increase in value far above any loss in interest. If a mistake is made in the selection, it can easily be remedied, since if the land has been wisely selected, there will be little difficulty in disposing of it.

Birdseye Perspective, Whittier College, Whittier, Cal.
ALLISON AND ALLISON, Architects

No one seriously questions that our buildings should be beautiful. Members of boards of education contemplating a building program have often learned too late that they cannot depend exclusively on sketches or pictures. It were better in such cases if board members could be induced to visit buildings in other communities so that they might recognize the difference in type of various school buildings and might also be convinced that a building in every way serviceable can and should be beautiful as well. The ordinary citizen can scarcely be blamed for the selection of poor designs when so many of our American cities afford in their court houses and municipal edifices such frightful and depressing examples of the building art. In these visits members of a board of education should be accompanied by some one intelligent enough to explain, if necessary, why certain architectural types are particularly appropriate and why such additions and conveniences as auditoriums, shops, kitchens and museums are not mere luxuries in education. Such types as the Mission, the Spanish colonial, and North Italian types, for example, are better suited for a climate like that of Southern California than are the heavier and more compact ones of the northern regions. An actual visit to completed buildings in their natural situations will show the appropriateness of certain forms rather than others more vividly than would a picture.

One thing that every board should require is that no public structure like a school should be erected until it has been passed upon by some person or commission whose artistic judgment would receive general acceptance. Many of our cities now have art commissions. Even though their verdicts have sometimes been questioned, it would be a wise procedure if all of our school houses had to pass the critical eye of some such body.

If the one-story structure can be used, we should not be

GRAMMAR SCHOOL NO. 2, GLENDORA, CAL.
ALLISON AND ALLISON, Architects

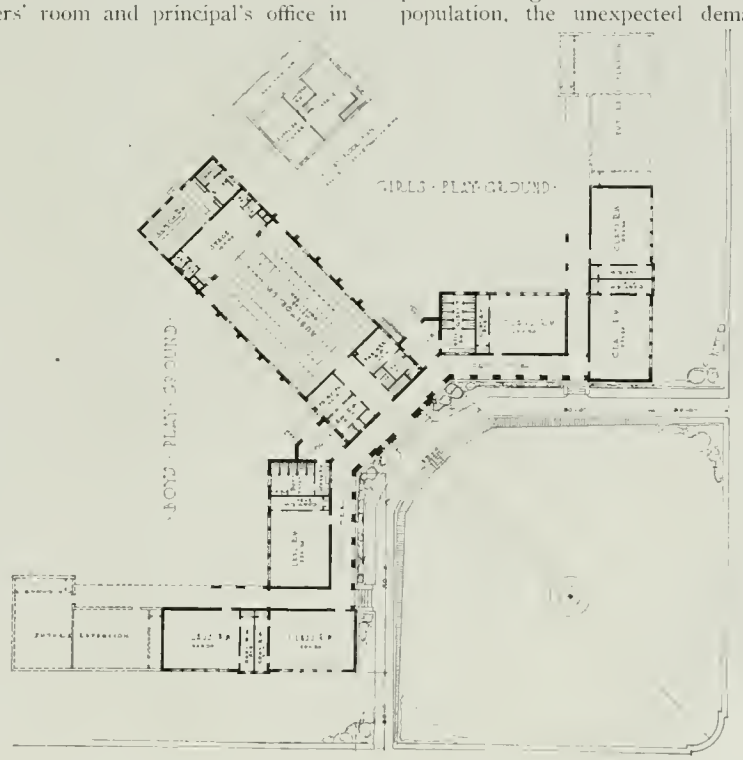
too anxious to have a single standard design. Standardization is a good thing, but not for exteriors. Modifications should be made, not only for the sake of variety, but for the purpose of adapting the building to the surrounding territory. In general, when climatic conditions permit, the building should be of the "T" or broad "U" type, with a single row of class rooms connecting with an open corridor or arcade. At either extreme would be the domestic science and manual training rooms. The other rooms would include the usual class rooms, with a teachers' room and principal's office in the center. Buildings with open arcades offer admirable opportunities for open-air study as occasion warrants and permit sufficient ventilation without the installation of expensive equipment. Furthermore, a building like this may face closely to the street, separated therefrom by an attractive garden. The space in the back may be used for school gardens and playgrounds so as to be removed from traffic.

Every school should have an auditorium, not for the school children alone, but also for the community. If such auditorium is part of the main building, it should be so constructed as to be easily closed off from the rest of the building. Some excellent auditoriums are now made as separate structures and are used as kindergartens. Very good examples of such buildings may be found in the city of Los Angeles.

Single-story buildings need not be fireproof. There is no danger to children when each child can walk out of a door or window equally well. Construction cost is much less for one-story buildings, not only because of cheaper material, but because this type of building obviates stairs. Even single-story buildings, however, should have occasional fireproof cross partitions extending through the roof, and, if possible, fireproof roofing.

The two-story building should be fireproof or semi-fireproof. This means additional cost not only for material, but also because of necessary provision for stairways. The stairways should, if possible, be enclosed in wire glass and with fireproof doors. Whatever type of building is selected, it must always be remembered that initial cost should not be the first consideration, since cost of maintenance should also be taken into account. Thus, if open corridors are to be used, it is better to have the floor of cement, tile or brick, rather than of wood.

Every school system should have a certain number of portable bungalows. The constant ebb and flow of school population, the unexpected demands that need immediate compliance, all make these portable buildings a great convenience. These little structures should not be offensive in appearance. They should be constructed with sufficient solidity to provide for comfort. Just now we are devising in Los Angeles an open-air portable bungalow which will be adequate for its purpose and it will be one of a type that may be transported from school to school.



Floor Plan, Grammar School No. 2, Glendora, Cal. ALLISON AND ALLISON Architects

The ventilation and heating of a school building become more complex as the building increases in size. For a single-story building the rooms of which are connecting with an open corridor, there is really no problem at all. For a two-story building with rooms on both sides of a corridor a mechanical system of ventilation becomes necessary. It is a mistake, however, to assume that the temperature of a room must remain absolutely constant. Many of our school rooms are kept too hot or too dry. Any system of ventilation which requires for its successful operation that the windows should be closed, as does the plenum system, is apt to work poorly at critical times if the installation be a cheap one. Where such a system is the exclusive source of air and heat, it is costly to install and often expensive to maintain. There is no question, however, that large city structures will have to depend upon mechanical systems of ventilation. For those communities fortunate enough to have sites of sufficient size to maintain low buildings with plenty

Gallatin District School, Los Angeles County, Cal.
ALLISON AND ALLISON, Architects

Grade School, Holtville, Imperial County, Cal.
ALLISON AND ALLISON, Architects

of space, it is probably true that the system of natural ventilation with steam heat will, notwithstanding the many new devices that appear in the market from time to time, prove most successful in the long run.

The members of a board of education could wisely defer to the opinion of architect and superintendent with respect to the technical aspects of school buildings, the arrangement of windows, the allowance of light, the type of ventilating apparatus and the provisions for special types of activities, but both architect and superintendent should explain the necessity for these things, inasmuch as the standards to be observed in providing them are not matters of esoteric knowledge beyond the understanding of any intelligent person. Especially important is it that the board of education will understand one matter already referred to; *i. e.*, that the cost of the building should never be computed in terms of its first cost only.

Reference has been made to a characteristic failure to properly provide for school sites. There is also another frequent mistake in permitting only a partial completion of school buildings. A board may be so anxious to cut down the cost or it may desire too ambitious a structure. In such cases the building or grounds are left incomplete. It is most important that accommodations be provided in the building before it is put to use. For example, grounds are left ungraded; place set apart for a garden left with unsuitable soil, or without facilities for irrigation when the climate requires it; store rooms are left without shelves; the interiors of class rooms are destitute of many conveniences which should be built in during construction and the installation of which at a later date involves disproportionate cost. It is a mistake to build unless we build completely. Only recently a magnificent high school building was completed in California and at the last moment it was found that funds for a cafeteria were insufficient so that either a very cheap structure must now be erected, which will spoil the appearance of the whole building, or there will be no luncheon facilities for students.

Entrance Detail, Grammar School, Holtville, Cal.
ALLISON AND ALLISON Architects

To summarize: The members of boards of education need not be expert educators nor architects in passing upon the problem of school accommodation and the design of school buildings, nor should they try to be. A board of education should be sufficiently familiar with education and architecture to appreciate what is significant and important, without endeavoring to be either architect or superintendent. Among the elemental facts respecting which they should have an understanding are the importance of land spaces; the need of a continuous building policy; the significance of beauty in design; the importance of the various facilities which the educator recommends,—their place in the whole scheme of education for knowledge, health and morality, and finally, the danger of cheap initial investments and ultimate excessive cost of maintenance.

CALEXICO HIGH SCHOOL, CALEXICO, CAL.
ALLISON AND ALLISON, Architects

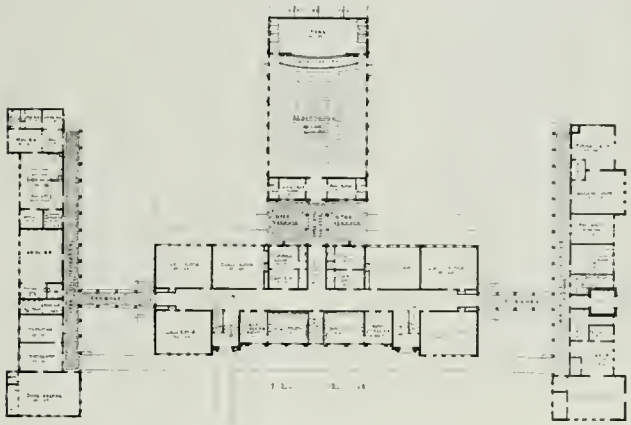
Some Remarks Upon the Practice of Architecture

(Continued from page 360)

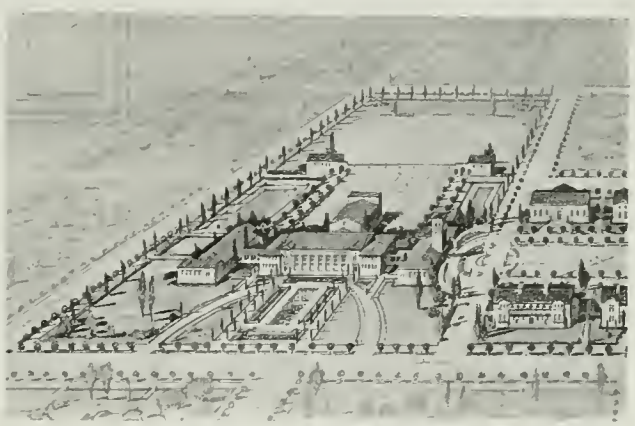
well and be beautiful, and cost no more money. The difference in these two results lies primarily in the hands of the architect to whom the school authorities look for expert advice; if he is without appreciation or knowledge of architecture as a fine art, is just a business man (though possibly a good one), he will be satisfied with accomplishing the merely workable utilitarian building, and will inevitably develop stock types to be used, with slight modifications, to meet all conditions. If he is, on the other hand, a true architect, in love with his profession and able to derive enjoyment from implanting beauty in his work for its own sake, he will find for each new set of conditions, not only the right practical solution, but will also discover and know how to use the many elements that may count for individuality and beauty in design.

No factors are more important in determining the arrangement of a scheme than the topography of the site, the location of streets, and the character and natural environment of the property. These influence the general plan, arrangement and composition the building or group shall take; the shape of roof lines, the materials, the color scheme, the whole treatment. In parts of the State where our climate resembles that of the warmer sections of Mexico, Spain and Italy, it is natural and fitting that open-air features be introduced, and these find architectural expression in cloistered passageways, open-air rooms, study halls, paved terraces, etc. The architecture takes on something of the character of the buildings of those countries as the logical outgrowth of such plan arrangement.

Owing to their greater flexibility, more intimate charm, and ready adaptability to the exigencies of plan, some of the freer styles of the Renaissance, or of the still earlier types of brick and plaster buildings of southern Europe are more fruitful sources of suggestion for school architecture than the more rigid forms of classic. In general, the buildings should be domestic and informal in character rather than monumental, and it should always be borne in mind that few elements count more in the impression of a building or group upon both the children who use it, and the passing public, than the treatment of the approaches and grounds before it.



FIRST FLOOR PLAN



BUILDINGS AND GROUNDS

CALEXICO HIGH SCHOOL, CALEXICO, CAL.
ALLISON AND ALLISON Architects

THE ARCHITECT

VOL. XIV. SAN FRANCISCO, DECEMBER, 1917 NO. 6

Editorial.

THERE is general agreement that public taste is an index of enlightenment and that architecture is one of the most potent factors in the formation of public taste. But as in most cases in which there is general agreement, no further attention is given the matter. Only the perusal of a body of work such as is displayed in the present issue serves to enforce the full educational possibilities which reside in good architecture, and to bring to mind numerous examples recalling how far short of the ideal we have too frequently fallen.

The traveler in California, throughout rural and urban districts alike, is constantly confronted by the liberal expenditure which every section of the community has devoted to buildings for the education of its children. In some sections of incipient or arrested development the generous democratic faith implied becomes to the sympathetic outsider touching, almost pathetic. Yet in a large proportion of cases the thoughtful observer is disheartened that so unquestioning a faith in education should go hand in hand with apparently the most complete ignorance of, or indifference to, the quality of education which it is worth while to seek. When, in housing the people's needs and in embodying their ideals, architectural incompetence seems to be at a premium, it gives pause to consider the kind of education for which these substantial sacrifices are being made. In the school building the future citizen passes a large portion of his time during the most formative years of his life. People who would recoil at the thought of subjecting a child to the influence of morally defective teachers or unsanitary quarters will with entire unconcern surround him with grounds and buildings of the most sordid character. The school board and the architect are trustees for the child's future. The misdirection of the latent moral and æsthetic forces of a minor child is on a parity, morally at least, with the maladministration of an estate by the guardian of a minor child. An architect is at all times under obligation to his art to take the best advantage of every opportunity presented; but the architect who undertakes a school assumes a special and serious duty toward the future of the community.

Caretakers' Entrance Gymnasium Building, Los Angeles State Normal School
ALLISON AND ALLISON Architects

To the architect who can present so accomplished a group of schools as that here shown is due not only the respect of the profession, but the acknowledgment of the public. Were the title of "schoolhouse specialist" not discredited by invidious associations, Allison & Allison would truly merit being so styled. Perhaps, however, it is as well that prudence bids the withholding of the term. Specialization implies limitation. That the greater part of the work to Allison & Allison's credit consists of schools is a fortuitous circumstance. The important fact is that, being in the largest sense of the word Architects, they would be specialists in any work undertaken.

To refer, as is often done, to a building of Allison & Allison's as being in this or in that style is an injustice. It is true that their work has fallen largely into two categories, the one related to the classic (Renaissance) tradition, the other to that of the brick Romanesque and Byzantine architectures of Italy. In this connection it is interesting to note that two of the large new works yet under construction derive from the Spanish Baroque and Colonial traditions. But although never innovators in the detail, or decorative aspect, of their architecture, the entire body of their work, of whatever derivation, is fused into a consistent and homogeneous whole by the intimate assimilation of the elements drawn upon, by a freshness and independence of outlook, and by a poise and assurance both in conception and in execution. No sensitive observer could confuse any one of their works with one of any other architect, even of an imitator. This is to possess originality in the truest sense of the word.

The communities which have been fortunate enough to avail themselves of such services are to be congratulated—even envied. The one subject for regret is that the activities of architects of sound ability and training should be so largely limited to one problem. The public will ultimately be the *losers* should their work continue to be too closely restricted to this one class of building.

IRVING F. MORROW.

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FRONTISPIECES

July—	Chiesa Di S. Maria, in Cosmedin, Rome.
August—	The Sather Tower, University of California, by John Galen Howard.
September—	La Porta, Chiesa Di S. Giovanni, Lucca.
October—	Ancient Gateway in Northern Italy
November—	Facade in Sgraffito of the Museum (Artistic-Industrial) of Rome.
December—	Santa Monica Tower and Tree.

Official News of Pacific Coast Chapters, A. I. A.

The Architect is the Official Organ of the San Francisco Chapter, Southern California Chapter and Washington State Chapter, A. I. A.

The regular minutes of meetings of all Pacific Coast Chapters of the American Institute of Architects are published on this page each month.

San Francisco Chapter, 1881—President, John Bakewell, Jr., 251 Kearny Street, San Francisco, Cal. Secretary, Morris M. Bruce, Flood Building, San Francisco, Cal. Chairman of Committee on Public Information, William B. Faville, Balboa Building, San Francisco. Chairman of Committee on Competition, William Mooser, Nevada Bank Building, San Francisco. Date of Meetings, third Thursday of every month; Annual, October.

Southern California Chapter, 1894—President, J. J. Backus, Room 35, City Hall, Los Angeles, Cal. Secretary, H. F. Withey, 1017 Van Nuys Building, Los Angeles, Cal. Chairman of Committee on Information, W. C. Pennell, Wright & Callender Building, Los Angeles. Date of Meetings, second Tuesday, except July and August, at Los Angeles.

Oregon Chapter, 1911—President, Joseph Jacobberger, Board of Trade Building, Portland, Ore. Secretary, W. C. Knighton, 307-309 Tilford Building, Portland, Ore. Chairman of Committee on Public Information, Joseph Jacobberber. Date of Meetings, third Thursday of every month at Portland; Annual, October.

Washington State Chapter, 1894—President, Charles H. Bebb, Seattle. First Vice-President, Daniel R. Huntington, Seattle. Second Vice-President, George Gove, Tacoma. Third Vice-President, L. L. Rand, Spokane. Secretary, J. C. Coté, Seattle. Treasurer, Ellsworth P. Storey, Seattle. Counsels: J. H. Schack, J. Stephen and Charles H. Alden. Date of Meetings, first Wednesday, except July, August and September, at Seattle, except one in spring at Tacoma. Annual, November.

The American Institute of Architects—The Octagon, Washington, D. C. Officers for 1917: President, John Lawrence Mauran, St. Louis, Mo.; First Vice-President, C. Grant La Farge, New York City, N. Y.; Second Vice-President, W. R. B. Willcox, 400 Boston Block, Seattle, Wash.; Secretary, Burt L. Fenner, New York City, N. Y.; Treasurer, D. Everett Waid, 1 Madison Ave., New York City, N. Y.

Board of Directors for One Year—Charles A. Coolidge, 122 Ames Building, Boston, Mass.; Charles A. Favrot, 505 Perrin Building, New Orleans, La.; Elmer C. Jensen, 1401 New York Life Building, Chicago, Ill. *For Two Years*—Edwin H. Brown, 716 Fourth Avenue, Minneapolis, Minn.; Ben J. Lubschez, Reliance Building, Kansas City, Mo.; Horace Wells Sellers, 1301 Stephen Girard Building, Philadelphia, Pa. *For Three Years*—William B. Faville, Balboa Building, San Francisco, Cal.; Burt L. Fenner, New York City; Thomas R. Kimball, Omaha, Neb.

Committee on Relations with Coast Chapters—Sylvain Schnaittacher, chairman; August G. Headman, George W. Kelham, W. O. Raiguel.

Committee on Programs of Meetings—W. H. Crim, Jr., chairman; W. B. Faville.

Chapter Trustees (Books with San Francisco Architectural Club)—Committee not yet appointed.

Committee to Study Building Conditions—G. Alexander Wright, chairman; Smith O'Brien, J. S. Fairweather.

Minutes of San Francisco Chapter

The regular monthly meeting of the San Francisco Chapter of the American Institute of Architects was held at Tait's Cafe, 168 O'Farrell Street, on Thursday evening, November 15, 1917. Mr. John Bakewell, Jr., the President, called the meeting to order at 8 p. m.

The following members were present: G. A. Applegarth, John Bakewell, Jr., Hermann Barth, E. G. Bolles, Chesley K. Bonestell, Morris M. Bruce, J. Harry Blohme, W. D. Bliss, Arthur Brown, Jr., Alfred I. Coffey, Ernest A. Coxhead, W. H. Crim, Jr., Will G. Corlett, Chas. W. Dickey, A. R. Denke, J. W. Dolliver, J. S. Fairweather, W. B. Faville, Albert Farr, B. S. Hirschfeld, John Davis Hatch, August G. Headman, W. C. Hays, John Galen Howard, Bernard J. Joseph, George W. Kelham, William Knowles, John O. Lofquist, James R. Miller, William Mooser, Fred H. Meyer, Smith O'Brien, W. O. Raignel, Arthur G. Scholz, Sylvain Schnaittacher, Albert Schroepfer, Edwin J. Symmes, Henry C. Smith, Walter T. Steilberg, Clarence R. Ward, Charles P. Weeks.

MINUTES

The minutes of the meeting held on October 18, 1917, were read and approved.

COMMUNICATIONS

From Charles Paff regarding the cancellation of his membership in the Chapter; three from William Stanley Parker, one relative to advertising, one relative to the revision of the Chapter Constitution and By-Laws, and one concerning the acceptance of resignations of Institute members; from Dr. Pischel regarding the dues of Mr. Albert J. Evers; from Mr. George B. McDougall, enclosing copy of Competition Announcement; from the State Housing and Immigration Commission, enclosing copy of State Housing Manual; from the Vermont Marble Company relative to the showing of a film; from Mr. H. F. Withey, Secretary of the Southern California Chapter, A. I. A., in *re* expense of the Legislative Committee; from Marshall & Stearns Company in *re* building conditions.

NEW BUSINESS

The Chair announced the appointment of the following standing committees to serve the Chapter for the current year:

Sub-Committee on Competitions—John Bakewell, Jr., chairman; Morris M. Bruce, secretary; August G. Headman, Sylvain Schnaittacher, Charles P. Weeks.

Institute Relations—John Galen Howard, chairman; Ernest A. Coxhead, W. B. Faville, Wm. Mooser, G. Alexander Wright, J. W. Dolliver.

Committee on Municipal Matters—George W. Kelham, chairman; John Reid, Jr., Walter D. Bliss, W. H. Crim, Jr., Clarence R. Ward, Charles H. Cheney.

Committee on Education—G. A. Applegarth, chairman; Horace G. Simpson, James A. Magee.

Committee on Legislation—Wm. Mooser, chairman; Edgar A. Mathews, B. J. Joseph, J. J. Donovan, Smith O'Brien.

Chapter Advisory Committee on Competitions—Wm. C. Hays, chairman; Wm. Mooser, Arthur Brown, Jr., J. S. Fairweather, G. A. Applegarth, George W. Kelham.

Committee to Study Building Conditions—G. Alexander Wright, chairman; Smith O'Brien, J. S. Fairweather.

Mr. August G. Headman read a report from the Institute Committee on Competitions.

Following a discussion of the Institute requirements in relation to the program for the State Building Competition, Mr. Headman moved that a telegram be sent to Mr. McDougall, State Architect, recommending the suggested changes in the Competition program contained in the report of the Institute Committee on Competitions. Mr. Schnaittacher moved as a substitute that the report of the committee be approved by the Chapter and a telegram to that effect be sent to Mr. McDougall, which was seconded and unanimously carried.

Referring to the communication from Mr. W. Stanley Parker, Secretary of the A. I. A., the same were referred to the Board of Directors for action.

ELECTION OF NEW DIRECTORS

The Chair appointed Messrs. Crim and Fairweather as tellers and Mr. B. J. Joseph as judge, to count the ballots for new directors. The counting of the ballots showed Mr. August G. Headman with 26 votes and Mr. Charles P. Weeks with 25 votes, elected for the three-year term; Mr. Smith O'Brien and Mr. Wm. C. Hays, each with 21 votes, elected for the two-year term.

ADJOURNMENT

There being no further business before the Chapter, the meeting adjourned at 9:30 p. m.

Subject to approval.....1917.

MORRIS M. BRUCE, *Secretary*.

Minutes of Southern California Chapter

The one hundred and eleventh regular meeting of the Southern California Chapter of the American Institute of Architects was held at Jahnke's Cafe, on Tuesday, November 13, 1917.

The meeting was called to order by Mr. J. J. Backus, President, at 7:20 p. m.

The following members were present: D. C. Allison, J. C. Austin, J. J. Backus, A. B. Benton, G. E. Bergstrom, W. E. Erkes, Robert Farquhar, W. H. Glidden, J. C. Hillman, R. G. Hubby, J. P. Kremple, A. C. Martin, S. B. Marston, Octavius Morgan, Robert H. Orr, H. M. Patterson, Alfred W. Rea, R. S. Requa, A. F. Rosenheim, G. B. Van Pelt, August Wackerbarth, J. T. Vawter, H. F. Withey.

As guests of the Chapter were present: Messrs. John Bowler, of the *Southwest Contractor*; Athol McBean, of the firm of Gladding-McBean Co., of San Francisco, and Oswald Speir, Los Angeles representative of the above named firm.

Minutes of the one hundred and tenth meeting of members were read and approved.

The Secretary announced the appointments made by the President of the committees for the ensuing year.

Are you doing your bit - to help win the war?

Abnormal production, plus the necessity of rapid transportation of supplies and soldiers has choked every medium of transportation.

You direct the transportation of huge quantities of building materials and can do much to relieve the strain.

The government has asked that instead of ordering materials that must come thousands of miles across the continent to order from local manufacturers whenever possible.

This is already being done in the plumbing line, for most of the architects have found that Pacific Plumbing Fixtures are of superior quality and cost no more than eastern plumbing fixtures.

You will find this true of many other products manufactured on the coast.

These appointments were as follows

STANDING COMMITTEES

Chapter Membership—S. Tilden Norton, chairman; P. H. Frohman, Lyman Farwell.

Entertainment—P. A. Eisen, chairman; Albert R. Walker, A. M. Edelman.

A. I. A. Sub-Committee on Public Information—J. E. Allison, chairman; Walter E. Erkes, F. Pierpont Davis.

SPECIAL COMMITTEES

A. I. A. Sub-Committee on Competitions—F. P. Davis, chairman; Lester H. Hibbard, Reginald D. Johnson.

Permanent Committee on Legislation—G. E. Bergstrom, chairman; J. E. Allison, H. M. Patterson.

Ethics and Practice—A. C. Martin, chairman; H. M. Patterson, Frank L. Stiff.

A. I. A. Sub-Committee on Education—Elmer Grey, chairman; Carleton M. Winslow, D. C. Allison.

City Planning—H. F. Withey, chairman; Sumner Hunt, Lyman Farwell

Contracts and Specifications—John P. Kremple, chairman; Frank D. Hudson, A. M. Edelman.

Institute Membership—A. F. Rosenheim, chairman; A. C. Martin, S. B. Marston.

Committee on Building Companies—Robert Orr, chairman; Alfred W. Rea, Homer Glidden.

Next was read the appointment made by President J. J. Backus of a committee of delegates to represent the Chapter at the Conference of the League of the Southwest, to be held at San Diego, November 14th to 16th, inclusive.

These delegates were as follows: Henry Lord Gay, Louis J. Gill, Carleton M. Winslow, H. S. Hebbard, and A. B. Benton.

Inasmuch as the committee appointments were but recently made, the President stated that no reports would be asked for at this time.

Communications were read as follows:

From the Portland Cement Association of Chicago, requesting the Chapter to join in a campaign to "boost the use of concrete," and asking for a list of members to whom they might send their literature.

From the Executive Secretary of the A. I. A., Mr. E. C. Kemper, by direction of President Mauran, stating that the call for men to accept commissions in the Signal Corps has been filled, and there are on file enough names for all future calls.

From Mr. William Stanley Parker, Secretary of the A. I. A., announcing a resolution passed by the Board of Directors condemning the issuance by architects of monographs of their work in book or pamphlet form, which are supported by advertisements, as contrary to the spirit of the Canon of Ethics.

From the Executive Secretary of the A. I. A., Mr. E. C. Kemper, announcing the election to membership in the Institute of Mr. Winslow Soule, of Santa Barbara.

From Mr. George McDougall, State Architect, announcing the institution of a competition for State buildings at Sacramento.

A resolution was next presented by Mr. Withey, a copy of which is to be spread upon the minutes of the meeting, proposing that the Chapter petition the City Council to draft a City Planning Ordinance.

This resolution was unanimously adopted.

Under the head of "Papers and Discussions," Mr. Rosenheim delivered a very interesting talk on "Brick, the Building Material of the Ages," at the conclusion of which Mr. Morgan, seconded by Mr. Wackerbarth, moved that a vote of appreciation be extended to Mr. Rosenheim. The same was duly authorized.

Following the reading of this paper, a general discussion took place on the subject, participated in at length, and very interestingly, by Mr. Speir and Mr. McBean, followed by Mr. Benton, Mr. Martin, Mr. Morgan, Mr. Patterson, Mr. Austin, Mr. D. C. Allison, Mr. Farquhar, Mr. Backus and Mr. Hubby.

A reading followed by the Secretary of the new Constitution as prepared by the special Committee on Constitution and By-Laws, and was tentatively accepted, pending the approval of the Secretary of the A. I. A. later.

Mr. D. C. Allison, in well-chosen words, expressed appreciation of the services rendered by the former Secretary, Mr. A. R. Walker, in the past four years, and moved that the Secretary formally communicate the Chapter's thanks for this service in a letter to Mr. Walker. This motion was duly seconded and unanimously carried.

A motion made by Mr. Morgan, duly seconded and carried, was to the effect that the Secretary should write a similar letter to Mr. J. E. Allison, expressing the Chapter's appreciation of his services as presiding officer of the Chapter for the past year.

The Secretary then presented designs submitted for the medal to be awarded for meritorious architectural work in January. These designs were referred to the Committee on Public Information for action.

A resolution was offered by Mr. A. C. Martin, seconded by Mr. Kremple and duly carried, that copies of the Institute's book on City Planning Progress be sent to each member of the City Council and to the Mayor, the expense of the same to be personally assumed by Mr. Martin.

Mr. Rosenheim offered a resolution, duly seconded and unanimously carried, that a vote of thanks be extended Mr. Speir and Mr. McBean for their enlightening and very interesting remarks on the subject of building material.

The meeting was adjourned at 9:45 p. m.

(Signed) H. F. WITHEY, *Secretary.*

COPY OF CITY PLANNING RESOLUTION

WHEREAS, This Southern California Chapter of the American Institute of Architects, appreciating the need of a more efficient constructive policy for the physical development of the city of Los Angeles, and recognizing the demand from many sources for such city planning; and

WHEREAS, Having taken up the study of the subject in conjunction with several of the civic organizations, and from such study coming to the conclusion that it would be for the best interests of the city and its citizens from points of governmental efficiency, financial economy and esthetic reasons, that a survey should be made showing the present physical conditions of the city and its needs, followed by the drafting of a comprehensive plan outlining the future development; and

WHEREAS, It is believed that this work will be best accomplished by the creation of a new department, governed by a commission as a unit to the present official government, be it therefore

Resolved, That this Chapter in regular session assembled November 13, 1917, petition the City Council of Los Angeles to take the necessary measures toward drafting an ordinance for the creation of a City Planning Department, and when so done, to submit a copy of the same for consideration to this organization, the City Planning Association, the Municipal League, the City Club, and other civic organizations that may be interested; and be it further

Resolved, That after this ordinance has been drafted, a hearing be granted by the Council to the above-named societies for the purpose of considering its provisions, and making the same an official ordinance; and be it further

Resolved, That a copy of this resolution be spread upon the minutes of this meeting, and that a copy be sent to the City Council.

In conjunction with this resolution it is hereby stated that the membership of this Chapter is ninety-three, in good standing, and that the attendance at this meeting is twenty-three.

(Signed) H. F. WITHEY,
Secretary City Planning Committee.

Minutes of Washington State Chapter

NOVEMBER 7, 1917.

The Chapter received a very interesting communication from A. H. Albertson, one of its members, in which he suggested the formation of a permanent fund. This fund would be raised by contribution and bequest, the principal being held in perpetuity, the interest only being used.

The Chapter arranged to forward Christmas remembrances to its members serving in the army. A voluntary contribution was taken up for that purpose.

The standard form of Chapter Constitution and By-Laws was provisionally adopted, and the Ways and Means Committee were instructed to prepare a final draft, which will be considered at a special meeting to be held about November 20th. Mr. W. R. Wilder, of the firm of Wilder & White, of New York, was a guest at the meeting, as was also Mr. McClellan, the assistant professor of architecture at the University of Washington. Mr. Wilder complimented the Chapter on the work which had been done since his last visit to Seattle three years ago.

G. C. FIELD, *Acting Secretary.*

Current Notes

Horace G. Simpson and Hard Wood, architects, 110 Sutter Street, announce the termination of their association. Work now building by the former association will be completed by them.

Mr. Wood and Mr. Simpson will continue practice independently, being located for the present at the above address.

The firm of Shreeve & Madsen, architects, 216-217 Col. Hudson Building, Ogden, Utah, has been dissolved.

Architect D. Leo Madsen will continue the practice of architecture at the same address.

Mr. A. K. Thompson and Mr. Theodore R. Jacobs have entered into an association and are practicing the profession of architecture under the name of Thompson & Jacobs, with offices in Suite 1, Dudley Building, North Yakima, Wash., and desire to have manufacturers' catalogs and samples for their files.

Aggregate-toned Stucco

COLORED aggregate stucco, made of Atlas-White Portland Cement mixed with richly colored granite or marble screenings or warm-toned sands or gravels, adds a whole new field of beauty to the artistic possibilities of stucco.

It is as durable, as fire-resistant, as economical as white or gray stucco---and is free from their limitations as to color.

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"Color Tones in Stucco," a monograph for architects, describes our experiments and contains specimen panels of aggregate-toned stucco, reproduced in full scale and color, formula for each panel, and a useful guide to specifications for color stucco. Use the coupon to get your copy.

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Langton Lime & Cement Co.	Salt Lake City, Utah	J. McCraken Co.	Portland, Ore.
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A. KNOWLES, Plasterer

Finish coat--pebble dash, Atlas-White Cement with Monterey sand

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Send me *"Color Tones in Stucco,"* and place me upon your mailing list for future monographs on stucco research and experiments.

Name_____ Address_____

ARCHITECTS' REFERENCE INDEX

Containing List of Manufacturers, Their Representatives and Serviceable Literature

ASBESTOS BUILDING LUMBER
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Illustrated and descriptive pamphlet, 7¾x10¾, 8 pp. Pamphlet, 4x8½, 8 pp. Price list, 3½x6¼. Literature of various sizes, samples, etc. "Service Sheets," working drawings, details of application, size 16½x21½.

ASBESTOS CORRUGATED SHEATHING
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Descriptive catalogue, 5¼x8¼, 24 pp. Catalogue of details and specifications for application of roofing and siding, size 8½x11, 40 pp. Lists of buildings covered. Price lists, 3½x6¼, 6 pp., and literature of various sizes, samples, etc. "Service Sheets," working drawings, details of application, size 16½x21½.

ASBESTOS SHINGLES
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Illustrated catalogue. Detail specifications, 8x10, 20 pp. Descriptive catalogue, various types of roof covering, 5¼x8¼. Various pamphlets, 3¾x6. Current price lists, 3½x6¼, 6 pp. Lists of buildings and literature, various sizes, samples, etc. "Service Sheets," working drawings. Detail of application, size 16½x21½.

BRICK, ENAMELED
Los Angeles Pressed Brick Co., Frost Bldg., Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Catalogue on "Enameled Brick for Facing," illustrating and listing names of prominent buildings finished with Enameled Brick. 5x7½, 48 pp.

BRICK, FIRE AND REFRACTORIES
Henry Cowell Lime & Cement Co., 2 Market Street, San Francisco, Cal.
Imported and domestic brands.
Catalogues and various literature.
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Bldg., Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Descriptive catalogue, 5x7, 54 pp.
Simons Brick Company, 125 West Third Street, Los Angeles, Cal.

BRICK, PRESSED
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Bldg., Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Moulded and Ornamental Pressed Brick. General catalogue. 5x7, 54 pp.
Simons Brick Company, 125 West Third Street, Los Angeles, Cal.

BRICK, PAVING
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.

CEMENT, PORTLAND
Atlas Portland Cement Company, The, 30 Broad St., New York.
(Western Representatives, see advertisement.)
Building a Bungalow. Addressed to owners. Booklet 8x10½ 14 pp, with 4 insert plates.
Choosing the Garage. Describing actual construction. Booklet. 8x10½ in. 26 pp.
"Color Tones in Stucco," a booklet of 20 pages and cover, in full colors. Size 8½x11 in.
Commercial Garages. With construction notes and architectural treatment. Booklet 8x10½ in. 12 pp.
Early Stucco Houses. With modern stucco specifications. Booklet. 8½x11 in. 24 pp.
Guide to Good Stucco. Addressed to contractors. Booklet. 8½x11. 20 pp.
Handbook and Treatise. Concrete in factory construction. 6½x8¾ in. 250 pp.
Information for Home Builders. Addressed to owners. Booklet. 8½x10¾. With 8 insert plates.
Henry Cowell Lime & Cement Co., 2 Market Street, San Francisco.
Cowell Portland Cement Co., Cowell, Cal.
Mt. Diablo Brand especially adapted for cementing oil wells. Literature and pamphlet supplies on request as furnished by the Portland Cement Association.
Santa Cruz Portland Cement Co., Crocker Bldg., San Francisco.
Standard Portland Cement Co., Crocker Bldg., San Francisco, Cal.
Bulletin 12 pp. Size 6x9; also furnish bulletins and specifications for various classes of work requiring Portland Cement.

ELECTRICAL EQUIPMENT
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
Descriptive Pamphlet, 3½x6. 12 pp. Descriptive, 4x8½. 8 pp. "Service Sheets" working drawings. Detail of application. 16½x21½.

ELEVATORS
Otis Elevator Co., Eleventh Avenue and 26th Street, New York.
Otis Elevator Co., 2300 Stockton Street, San Francisco, Cal. Offices in all principal Coast cities.
Otis Electric Traction Elevators. Bulletin. 6x9 in. 28 pp.

ESCALATORS
Otis Elevator Co., Eleventh Avenue and 26th Street, New York.
Otis Elevator Co., 2300 Stockton Street, San Francisco, Cal. Offices in all principal Coast cities.
Otis Escalators. Bulletin. 6x9 in. 36 pp.

GLASS
W. P. Fuller & Co. Principal Coast cities.
Plate, Sheet and Mirror Lists.
Glass Samples.
Keasbey & Mattison Co., Ambler, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal Pacific Coast representative CORRUGATED WIRE GLASS for skylight construction (without housings), used in connection with Asbestos Corrugated Sheathing. Catalogue of details. 8½x11. 40 pp.

IRONING BOARDS
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
Pamphlet. 3½x6⅜ in. 4 pp.

LANDSCAPE ENGINEERS
MacRorie-McLaren Co., 141 Powell Street, San Francisco, Cal.
Descriptive catalogue. 5x8¾. 52 pp.

LATH, METAL
North Western Expanded Metal Co., 934 Old Colony Building, Chicago, Ill.
Designing Data. Scientific treatise on reinforced concrete. 4x6½ in. 88 pp.
Kno-Burn Expanded Metal Lath. Treatise on metal lath, with details and specifications. 6x9 in. 52 pp.
"Chanelath" Handbook. Treatise on ribbed metal lath details and specifications of its application to reinforced concrete construction and for plastering work. 6x9 in. 48 pp.
Stucco Specifications. Reprint of the standard specifications adopted by the American Concrete Institute.

LIME
Henry Cowell Lime and Cement Co., 2 Market Street, San Francisco, Cal.
Santa Cruz and Cuwell Santa Cruz Brands.

MANTEL BRICK
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Illustrative of designs for mantel. 5x6 in. 54 pp.

MILL WORK
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
Catalogue of Moulding Columns, Doors and General Mill Work. 7x10. 94 pp.

PAINTS, ENAMELS AND WOOD FINISHES
Berry Bros., Wight and Leibe Streets, Detroit, Mich.
Berry Bros., 250 First Street, San Francisco, Cal.
Natural Woods and How to Finish Them. Complete varnish specifications. 4¾x6½ in. 94 pp.
Luxeberry Cemeot Coating. Color card. 3⅛x8⅞ in. 3 pp.
Boston Varnish Co., Everett Station, Boston.
San Francisco Office, A. L. Greene, Mgr., 311 California Street.
Kyanize Enamel. Complete specifications. Booklet. 5x7 in. 20 pp.
Kyanize White Enamel. Directions. Circular. 3½x6 in. 8 pp.
Price List of Varnishes and Enamels. 3½x6 in. 24 pp.
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Decorator's Sample Books.
The Muralo Co., New Brighton, New York.
A. L. Greene, Manager San Francisco Office, 311 California Street, San Francisco, Cal.
Catalogues, literature and color cards.
R. N. Nason & Co., 151 Potrero Avenue, San Francisco, Cal.
Catalogues, literature and color cards.
Wadsworth, Howland & Co., Inc., 139 Federal Street, Boston.
San Francisco Office, James Hambly & Sons, 268 Market Street, San Francisco, Cal.
Los Angeles Office, 447-449 E. Third Street, Los Angeles, Cal.
Bay State Brick and Cement Coating. Catalogue. 4x9. 24 pp. Color plates.
Bay State Finishes, Stains, and Varnishes. Pamphlets. Color cards, etc.

PIPE, WOOD
Pacific Tank & Pipe Co., 318 Market Street, San Francisco, Cal.
Catalogue of wood pipe and tanks for all purposes. 4x8¾ in. 40 pp.

PLUMBING EQUIPMENT
Pacific Sanitary Mfg. Co., 67 New Montgomery Street, San Francisco, Cal.
Northern Manager, H. L. Frank, 80 Front Street, Portland, Ore.
Southern Manager, C. B. Noyes, 201 Union Oil Building, Los Angeles, Cal.
General catalogue "C." 6½x9 in. 176 pp. Indexed.
School Sanitation Book. 6x9. 32 pp.
Standard Sanitary Manufacturing Co.
San Francisco Warehouse, Display Rooms and Offices, Bluxome St.
Los Angeles Warehouse, Display Rooms, Offices, Mesquit St.
Seattle, 5300 Wallingford Ave.
General Catalogue "P," 9x12, 674 pp. General Catalogue "PF," 9x12, 329 pp. Factory Sanitation Catalogue, 9x12, 36 pp. Built-in Bath, 9x12, 37 pp. Pottery Catalogue Sanitary Earthenware, 9x12, 38 pp. Shower Booklet, 3½x6, 19 pp. Efficiency Kitchen Book — Modern Kitchen Equipment, 5x7, 15 pp. Plumbing Fixtures for the Home, 5x7¾, 63 pp.

PORTABLE HOUSES
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
Catalogue Treatise on Portable House. Suitable for any location. Size 4x9. 12 pp.

POTTERY, GARDEN
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.

REINFORCING
North Western Expanded Metal Co., 934 Old Colony Building, Chicago, Ill.
"Chanelath" Handbook. Treatise on ribbed metal lath details and specifications of its application to reinforced concrete construction and for plastering work. 6x9 in. 64 pp.

ROOFING
W. P. Fuller & Co. Principal Coast cities.
Samples and descriptive circulars.

ROOFING TIN
Taylor Co., N. & G., 300 Chestnut Street, Philadelphia, Pa.
J. A. Drummond, 245 Mission Street, San Francisco, Cal.
A Guide to Good Roofs. Booklet. 3¾x5⅞ in. 24 pp.
Selling Arguments for Tin Roofing. Booklet. 6x9¼ in. 80 pp.
"Service Sheets." Working Drawings. Details of tin roofing construction and tables of covering capacity. 16½x21½ in.
Standard Specifications for Tin Roofing Work. 7½x9 in.
Current Price List.

SEWER PIPE AND CLAY PRODUCTS
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Hand book and price list of sewer pipe, flue lining, chimney pipe and interlocking brick. 4x7. 22 pp.

SLIDING DOORS
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
"Pitcher's Disappearing Door." Folder. 3½x6 in. 8 pp.

TANKS, WOOD
Pacific Tank & Pipe Co., 318 Market Street, San Francisco, Cal.
Catalogue illustrative and descriptive of house and building tanks, towers and wood pipe for various purposes. 4x9. 40 pp.

TERRA COTTA, ARCHITECTURAL
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
"Standard Construction," published by the National Terra Cotta Society, containing details and plates for proper construction. Photographic albums of completed work.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
Specifications for architectural terra cotta and details of construction.
Northern Clay Co., Auburn, Wash.
Photographic albums, catalogues and literature of various sizes.

TILE, HOLLOW
Denny-Renton Clay & Coal Co., Hoge Building, Seattle, Wash.
Catalogues and various literature.
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Hollow Tile Fireproofing. General catalogue. 5x7 in. 54 pp.
Simons Brick Company, 125 West Third Street, Los Angeles, Cal.

TILE, ROOFING
Gladding, McBean & Company, Crocker Bldg., San Francisco, Cal.
Los Angeles Office, Trust and Savings Bldg.
Price list No. 45 on Clay Products. 5x7½ in. 70 pages, containing illustrations.
Los Angeles Pressed Brick Co., Frost Building, Los Angeles, Cal.
United Materials Co., 5 Crossley Bldg., San Francisco, Cal.
Catalogue showing attractive application of details and specifications for roofing tile. 8x11 in. 32 pp.
Simons Brick Company, 125 West Third Street, Los Angeles, Cal.

TREES, PLANTS AND SHRUBS
MacRorie-McLaren Co., 141 Powell Street, San Francisco, Cal.
Descriptive catalogue. 5x8¾. 52 pp.

VARNISHES
Berry Bros., Wight and Leibe Streets, Detroit, Mich.
Berry Bros., 250 First St., San Francisco, Cal.
Natural Woods and How to Finish Them. Luxeberry cement coating color cards. 3¼x8⅞. 3 pp. Complete varnish specifications. 4¼x6½. 94 pp.
Boston Varnish Co., Boston, Mass.
San Francisco Office, A. L. Greene, Mgr., 311 California Street.
Kyanize White Enamel. Directory Circular. 3½x6 in. 8 pp.
Kyanize Enamel. Complete Specification Booklet. 5x7. 20 pp.
Price lists of varnishes and enamels. 3½x6. 24 pp.
W. P. Fuller & Co. Principal Coast cities.
Unvarnished Facts. 8-page pamphlet.
Varnish and Enamel Descriptive Catalogue. 32-page catalogue.
Valentine's Valspar. Booklets and Circulars.
Wooden Panels Finishes with Fuller Varnishes and Oil Stains. Over 1,000 different Finishes.
Wadsworth, Howland & Co., Inc., 139 Federal Street, Boston.
James Hambly & Sons, 268 Market Street, San Francisco, Cal.
Pamphlets and color cards.
Los Angeles Office, 447-449 E. Third Street, Los Angeles, Cal.
R. N. Nason & Co., 151 Potrero Avenue, San Francisco, Cal.
Pamphlets, descriptive literature and color cards.

SASH CORD
Samson Cordage Works, 88 Broad Street, Boston, Mass.
Pamphlet in colors. 3½x6¼. 24 pp.

WALL BOARDS
National Mill & Lumber Co., 318 Market Street, San Francisco, Cal.
Pamphlet. A treatise on application of wall boards. 3½x6⅜. 6 pp. Also sample.

WATER HEATERS
Hoffman Heater Co., Lorain, Ohio.
Hoffman Heater Co., 397 Sutter Street, San Francisco, Cal.
Descriptive catalogue. 5x7 in. 32 pp.

WATERPROOFING
W. P. Fuller & Co. Principal Coast cities.
Color samples and descriptive circulars.
Concreta and Armorite.
The Muralo Co., New Brighton, New York.
San Francisco Office, A. L. Greene, Mgr., 311 California Street, San Francisco, Cal.
Catalogues and various pamphlets.
R. N. Nason & Co., 151 Potrero Avenue, San Francisco, Cal.
Pamphlets and literature.
Wadsworth, Howland & Co., Inc., 139 Federal Street, Boston.
James Hambly & Sons, 268 Market Street, San Francisco, Cal.
Los Angeles Office, 447-449 E. Third Street, Los Angeles, Cal.
Bay State Brick and Cement Coating. Catalogue. 6x9 in. 24 pp.

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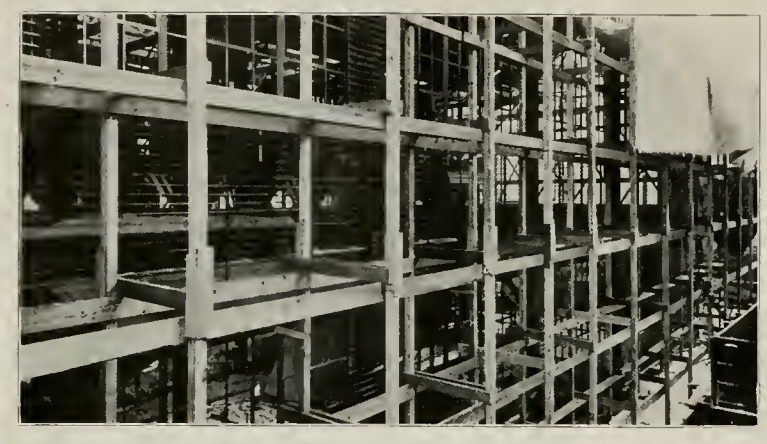

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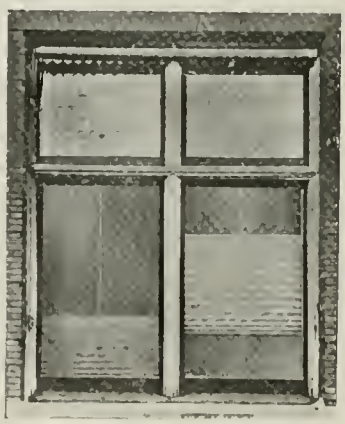

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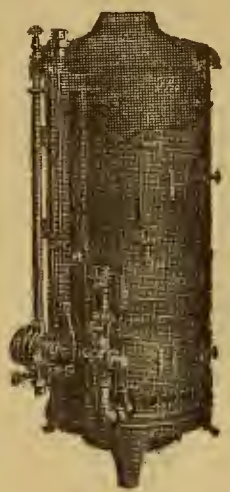

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